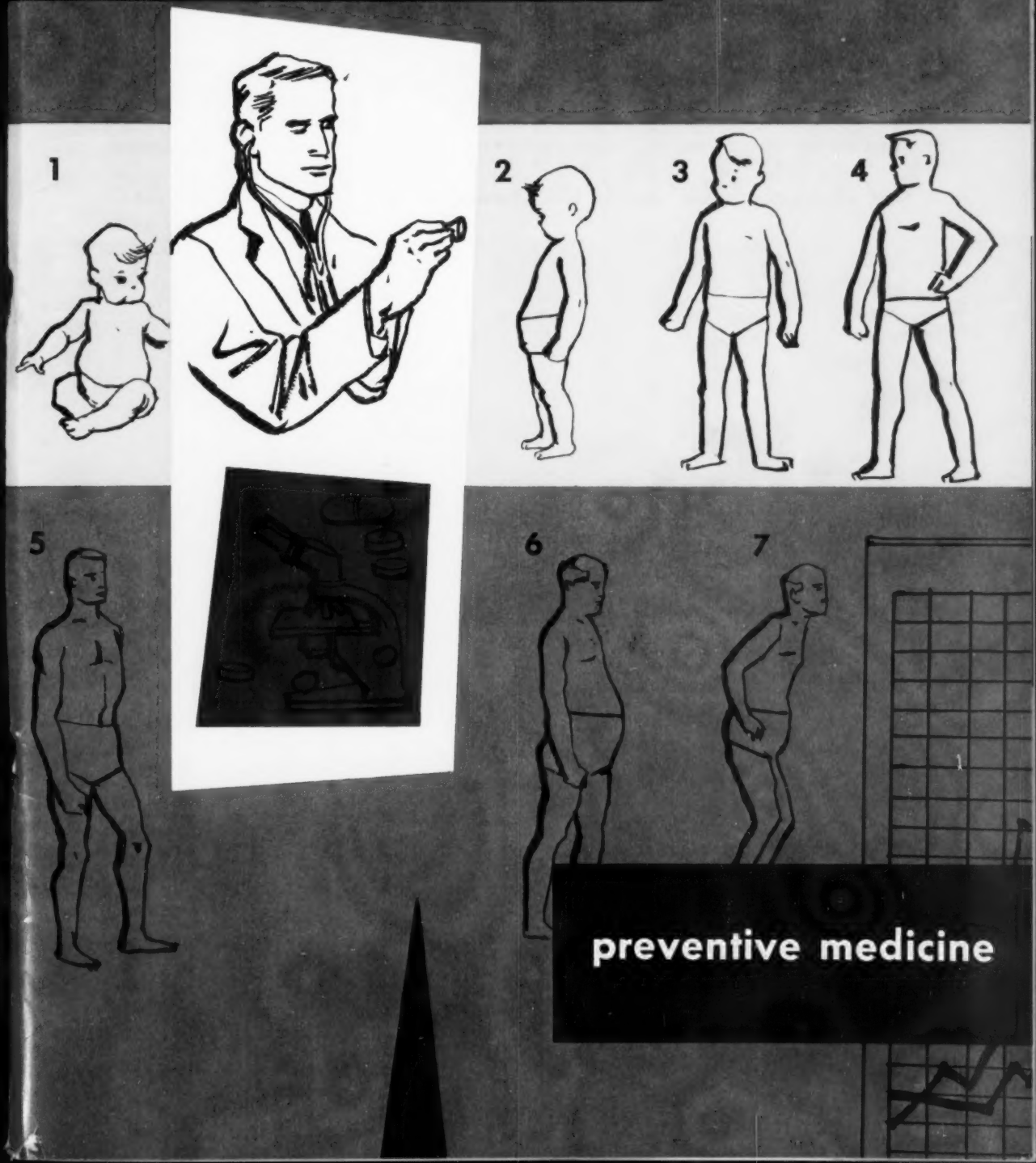
The Journal
Michigan
STATE MEDICAL SOCIETY

March, 1958
Volume 57
Number 3



preventive medicine

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1. Zimmerman, F. T., and Burgemeister, B.: *Arch. Neurol. & Psychiat.* **72**:720, 1954.
2. Zimmerman, F. T., and Burgemeister, B.: J.A.M.A. **157**:1194, 1955.
3. Zimmerman, F. T.: *Arch. Neurol. & Psychiat.* **76**:65, 1956.



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Usual Dosage • In psychoneuroses with anxiety and tension states *one 5 mg. tablet t.i.d.*

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POST-AMA HAWAIIAN TOUR

The Illinois State Medical Society is sponsoring a combined educational and pleasure tour of the Hawaiian Islands in connection with the Annual Meeting of the American Medical Association to be held in San Francisco in June. Members of the ISMS, their friends, and other physicians and their families are invited to join the group leaving San Francisco by air the night of June 25 and arriving in Honolulu the next morning. Quarters will be at the Royal Hawaiian Hotel. A week of pleasure and sight seeing will include a drive to the punch bowl crater, the national cemetery, a trip to the summit of Mt. Tantalus, a tour of Pearl Harbour and Battleship Row, a visit to Hickam Field, a luau or native feast at the Queen's Surf, also a tour of the other Hawaiian Islands. There will be plenty of time for the white sands of Waikiki Beach.

There will be a Hawaiian Summer Medical Conference in Honolulu, July 1-3. The tour will leave Honolulu for home, July 5, option of flying or by steamship Lurline, which takes five days. All this can be done for as little as $538. For information, address Mr. W. W. Moloney, Professional Building, "Old Orchard," Skokie, Illinois.

COMPREHENSIVE STUDY OF HEALTH INSURANCE

The University of Michigan is to undertake the type of study concerning health insurance the Michigan State Medical Society Council suggested two years ago.

Plans for the most comprehensive study of hospital and medical economics ever made in Michigan have been announced by the Kellogg Foundation, Battle Creek, The University of Michigan, and the Governor's Study Commission on Prepaid Hospital and Medical Care Programs.

The foundation has approved a two-year grant of $324,760 for the project, which is scheduled to start in March. Regents of the University authorized application for the funds.

The University of Michigan study stems directly from a request made by Circuit Court Judge E. Bowles, chairman of the Governor's Study Commission, to President Harlan Hatcher in June, 1957. It will be directed by Associate Prof. Walter J. McNerney, head of the Bureau of Hospital Administration in the U-M School of Business Administration.

McNerney will be advised and assisted in his work by an inter-disciplinary group of technical consultants and an inter-disciplinary policy committee, both comprised of U-M faculty members. The study will:

1. Survey hospitals, allied institutions, and agents in terms of services offered, general program, effectiveness of organization, and cost elements;
2. Examine hospital and medical prepayment and insurance plans with specific reference to internal operation, costs, benefits, and contract limitations;
3. Study the relationships between contract benefits, availability of services, and use of benefits and services by patients;
4. Examine the effectiveness of various proposals to control hospital and medical costs; and
5. Survey a sample of the population to determine its health experience, charges incurred, amount of insurance coverage, and current disability.

The following associations have pledged their full co-operation to the U-M in the study: the Michigan State Medical Society, Michigan Hospital Association, Michigan Association of Osteopathic Physicians and Surgeons, Michigan Osteopathic Hospital Association, Michigan Chiropodists Association, Michigan Hospital Service and Michigan Medical Service (Blue Cross-Blue Shield).

Other groups, including labor and farm organizations and representatives of management, have been fully acquainted with the proposal and expressed great interest in it.

Discussing the significance of the study, Professor McNerney said:

"The financing of medical and hospital care is at an important crossroads in Michigan. Consumer groups are pressing for better coverage and insurance. Prepayment agencies are trying to provide this without doing undue violence to the hospital and medical practices of the voluntary system.

"Some consumers are militantly in favor of comprehensive coverage from the first dollar up. Others are equally in favor of the employment of devices such as deductibles and co-insurance. Some carriers are willing simply to trade dollars, others are more concerned with the effect of coverage on legitimate use of services and benefits.

"At present, little organized data exists which pertains to such questions as what section of the medical base is sufficiently organized to insure, what is the impact of various prototype coverages on use, and so forth.

"The few data that are available are either too sparse, not specific enough to Michigan's problems, or not well enough organized.

(Continued on Page 314)

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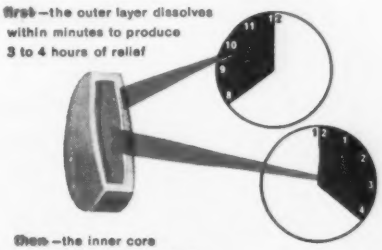
*Morrison, L. F.: Arch. Otolaryng. 59:48-53 (Jan.) 1954.

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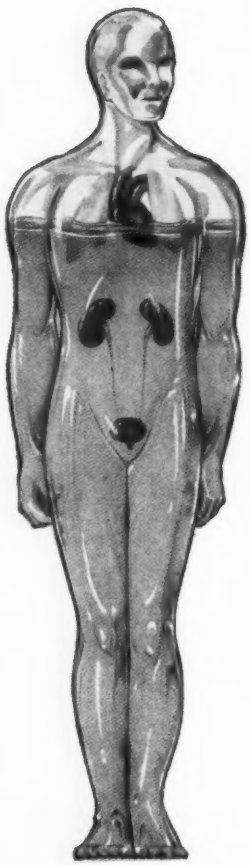
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HYPERTENSION

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The dosage of other antihypertensive medication (reserpine, hydralazine, etc.) is adjusted as indicated by patient response. If the patient is established on a ganglionic blocking agent (e.g., 'INVERSINE') this should be continued, but the total daily dose should be *immediately* reduced by 25 to 50 per cent. This will reduce the serious side effects often observed with ganglionic blockade.

3 ADJUST DOSAGE OF ALL MEDICATION

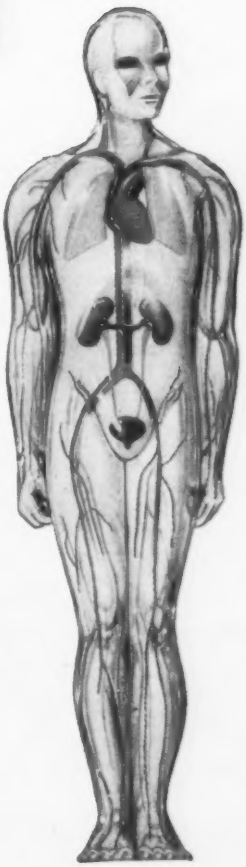
The patient must be frequently observed and careful adjustment of all agents should be made to determine optimal maintenance dosage.

BENEFITS:

- improves and simplifies the management of hypertension
- markedly enhances the effects of antihypertensive agents
- reduces dosage requirements for other antihypertensive agents—often below the level of distressing side effects
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INDICATIONS: management of hypertension

Smooth, more trouble-free management of hypertension with 'DIURIL'



COMPREHENSIVE STUDY OF HEALTH INSURANCE

(Continued from Page 310)

"Without a systematic study, both insurance and prepayment plans and health institutions will be forced to act without a clear-cut notion of the consequences, which is often expensive and which often creates poor public relations.

"Michigan's publics currently are neither in the mood for further expenses nor adjustments here and there based primarily on attrition. Factual data such as those which are the object of this overall study must be uncovered so that the agencies and institutions involved can take a stand which will be defensible and sufficiently right to meet needs for a sustained period of time."

The University will report its findings and "constructive interpretations" to the public. Upon completion of the project by its staff, the University's report will be submitted to the public through a U-M Policy Committee and President Hatcher's Office. The University hopes that the material developed will be helpful to the Study Commission in making its own recommendations to the Governor.

Dean Russell A. Stevenson of the School of Business Administration will be chairman of the University's Policy Committee for the project. Members will include Marvin L. Niehuss, vice president and dean of faculties; Dr. Albert C. Furstenberg, dean of the Medical School; Henry F. Vaughan, dean of the School of Public Health; Dr. Albert C. Kerlikowske, director of University Hospital; Rensis Likert, director of the Institute for Social Research; and McNerney.

Serving as technical consultants to the project from the U-M will be: Angus Campbell, director, Survey Research Center; Wilbur J. Cohen, professor of public welfare administration; Carl H. Fischer, professor of insurance and actuarial mathematics; William Haber, professor of economics; Felix Moore, chairman of the Department of Public Health Statistics; Leo A. Schmidt, professor of accounting; H. Ashley Weeks, research associate, program in hospital administration; John J. Zugich, assistant director, University Hospital; and Dr. John M. Weller, associate professor of internal medicine and research associate, Institute of Industrial Health.

Additional technical consultants, outside the University, will be appointed at a later date. Since his appointment as director of the study in July, 1957, Professor McNerney has contacted key representatives of health agencies, insurance and prepayment organizations, labor and management, at both the state and national levels.

He has advised them about the project and solicited their ideas on content of the study. Without exception, he reports, these representatives have been "interested and co-operative" in the project.

The total report is expected to be available two years after the start of the study in March. Interim reports will be made as material becomes available, possibly at the end of nine, twelve, and fifteen-month periods.

ONE STEP AHEAD OF BLUE SHIELD?

Someone has said that our profession must always be one step ahead of Blue Shield. This is roughly equivalent to saying that the horse should be in front of the cart. The main point is that we doctors—for our own sake as well as for the good of our patients—must always lead and guide this prodigious child of ours, Blue Shield — not vice versa.

Fifteen years is not a long period in the brief span of the average man's adult life. Yet, fifteen years ago Blue Shield was little more than a gleam in the eyes of a few groups of doctors in various parts of the U.S.A. Today Blue Shield is a nationwide association of medically-approved nonprofit prepayment plans that are now paying aggregate benefits at a rate of more than half a billion dollars per year for covered services rendered by physicians.

These seventy-odd locally-sponsored and locally controlled plans are engaged in an endless effort to help our profession provide an ever greater degree of medical care security to more than 40 million Blue Shield subscriber-members.

If Blue Shield has a big job to do, we doctors have a bigger one, for Blue Shield is "our baby"—to nurture and direct. We cannot escape the ultimate responsibility for what Blue Shield is, and for what it shall become. Nor would any of us want to deny our profession the credit for having built this mechanism that serves as a bridge of mutual benefit between doctors and patients.

We doctors need Blue Shield—and Blue Shield needs the guidance that only our profession can give it, if Blue Shield is to do the job for which we created it.

OPINION POLL PUBLICITY

The best defense is good offense. And a society that plans positive programs in keeping with the times is one up on the critics who flay medicine for its negative attitude. That's what Michigan State Medical Society did this summer when it put its collective stethoscope on the public pulse and found out just what changes people wanted in their insurance coverage. The opinion poll taken, Michigan's house of delegates met and promptly brought its state Blue Shield program up-to-date.

The society went all out to let the public know exactly what it was doing. Michigan citizens

(Continued on Page 320)

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TABLETS *(Sugar-coated)*
Each tablet contains:

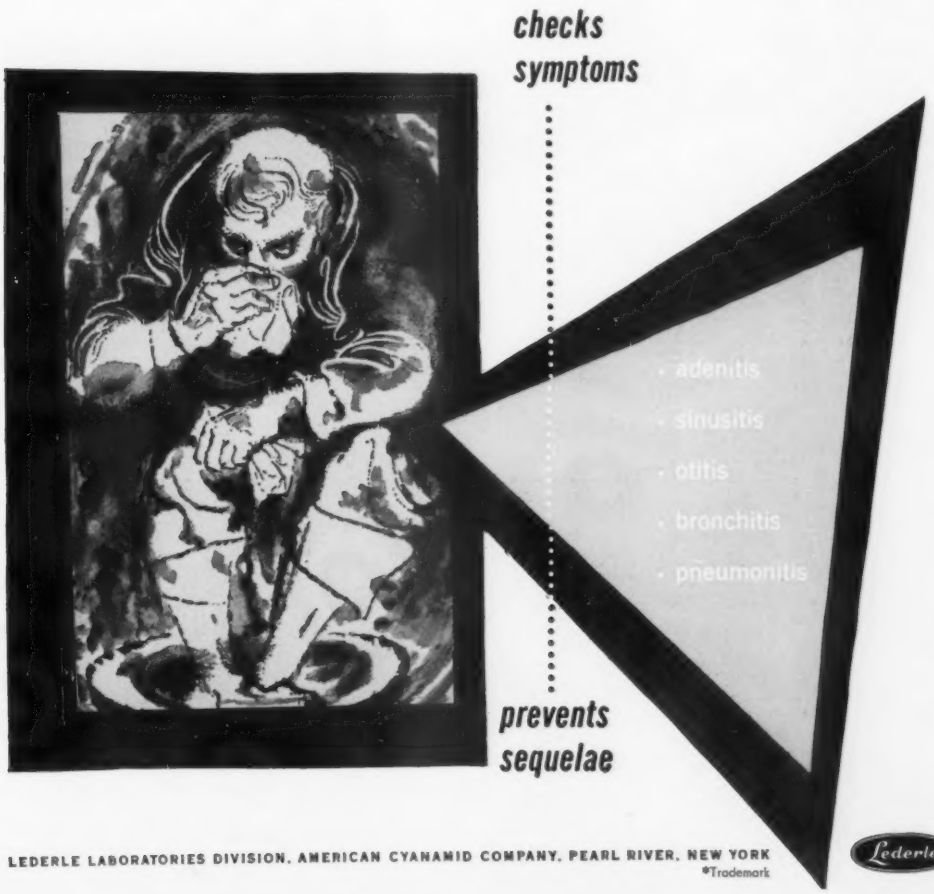
ACHROMYCIN® Tetracycline	125 mg.
Phenacetin	120 mg.
Caffeine	30 mg.
Salicylamide	150 mg.
Chlorothen Citrate	25 mg.

Bottles of 24 and 100

SYRUP *(Lemon-lime flavored)*
Each teaspoonful (5 cc.) contains:

ACHROMYCIN® Tetracycline equivalent to tetracycline HCl	125 mg.
Phenacetin	120 mg.
Salicylamide	150 mg.
Ascorbic Acid (C)	25 mg.
Pyrilamine Maleate	15 mg.
Methylparaben	4 mg.
Propylparaben	1 mg.

Bottle of 4 oz.



LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK
*Trademark

Lederle

NEW "Single-Rx"

for use



- Symptomatic relief of aches, pains, fever, coryza, and rhinorrhea associated with upper respiratory tract infections.
- Prevention of secondary pyogenic infections due to tetracycline-sensitive organisms — which often follow viral infections of the upper respiratory tract.

Bristol LABORATORIES INC. SYRACUSE, NEW YORK

MEDICATION

in "flu," "grippe," "virus" and the common cold

Tetrex®-APC

with BRISTAMIN®

TETRACYCLINE PHOSPHATE COMPLEX WITH PHENYLTOLOXAMINE AND APC

Each TETREX-APC WITH BRISTAMIN Capsule contains:

A broad-spectrum antibiotic

TETREX (tetracycline phosphate complex) ..... 125 mg.
(tetracycline HCl activity)

An established analgesic-antipyretic combination

Aspirin ..... 150 mg.
Phenacetin ..... 120 mg.
Caffeine ..... 30 mg.

A dependable antihistamine

BRISTAMIN (phenyltoloxamine, Bristol) ..... 25 mg.

Dosage: *Adults:* 2 capsules at onset of symptoms, followed by 2 capsules 3 or 4 times a day for 3 to 5 days. *Children, 6 to 12 yrs.:* One-half adult dose.

Supplied: Bottles of 24 and 100 capsules.



there's pain and inflammation here... it could be mild or severe, acute or chronic, primary or secondary fibrositis—or even early rheumatoid arthritis

more potent and comprehensive treatment than salicylate alone

. . . assured anti-inflammatory effect of low-dosage corticosteroid[1]

. . . additive antirheumatic action of corticosteroid plus salicylate[2-5] brings rapid pain relief; aids restoration of function.

. . . wide range of application including the entire fibrositis syndrome as well as early or mild rheumatoid arthritis

more manageable corticosteroid dosage

. . . much less likelihood of treatment-interrupting side effects[1-6]

. . . simple, flexible dosage schedule



in any case
it calls for

Sigmagen®

corticoid-salicylate compound

tablets

Composition

Meticorten® (prednisone)	0.75 mg.
Acetylsalicylic acid	325 mg.
Aluminum hydroxide	75 mg.
Ascorbic acid	20 mg.

Packaging: Sigmagen Tablets, bottles of 100 and 1000.

References: 1. Spies, T. D., et al.: J.A.M.A. 159:645, 1955. 2. Spies, T. D., et al.: Postgrad. Med. 17:1, 1955. 3. Gelli, G., and Della Santa, L.: Minerva Pediat. 7:1456, 1955. 4. Guerra, F.: Fed. Proc. 12:326, 1953. 5. Busse, E. A.: Clin. Med. 2:1105, 1955. 6. Sticker, R. B.: Panel Discussion, Ohio State M. J. 52:1037, 1956.

Acute conditions: Two or three tablets four times daily. After desired response is obtained, gradually reduce daily dosage and then discontinue.

Subacute or chronic conditions: Initially as above. When satisfactory control is obtained, gradually reduce the daily dosage to minimum effective maintenance level. For best results administer after meals and at bedtime.

Precautions: Because Sigmagen contains prednisone, the same precautions and contraindications observed with this steroid apply also to the use of Sigmagen.

SCHERING CORPORATION • BLOOMFIELD, N. J.

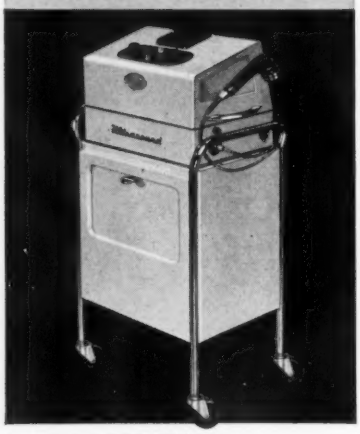
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Schering

ULTRASOUND,

T ESTED AND

FOUND BENEFICIAL



BURDICK UT-1

ULTRASONIC UNIT

Clinical reports, both here and abroad, have been in agreement on the value of ultrasound in the following conditions:

Traumatic Injuries • Osteoarthritis • Periarthritis Fibrositis • Painful Neuroma • Rheumatoid Arthritis Bursitis • Radiculitis • Scars

A compilation of detailed clinical reports and ultrasound technics is available upon request from the Burdick Corporation.

The Burdick UT-1 Ultrasonic therapy unit is a tested result of pioneering in this field. It features a coupling signal that warns when contact is inadequate for effective treatment. The right-angled applicator and flexible cable add ease to operation. Burdick also has a smaller, portable machine — the UT-4. We will be happy to demonstrate both machines to you at your convenience.

The UT-1 and UT-4 are sold through 296 qualified medical supply houses throughout the United States. Over 1,500 Burdick sales representatives are backed by complete service facilities for all Burdick equipment.

Burdick

THE BURDICK CORPORATION

MILTON, WISCONSIN

Branch Offices: CHICAGO • NEW YORK

Regional Representatives:

ATLANTA • CLEVELAND • LOS ANGELES

THE G. A. INGRAM COMPANY

4444 Woodward Avenue, Detroit 1, Michigan

OPINION POLL PUBLICITY

(Continued from Page 314)

were told—in a veritable barrage of publicity—that the doctors were consulting them on their medical insurance needs. *A four month publicity schedule was planned in advance, building gradually to a climax when study results were released in September.*

No medium was overlooked. Fifteen and thirty-minute shows were presented on *radio* and five-minute tapes were sent to sixty-seven stations. Four thirty-second spot announcements were mailed out to sixty-three stations along with a letter from the survey's co-sponsor, the Michigan Health Council.

To *television* stations went two cartoon slides, and a newscast insertion for two thirty-second spot announcements. One station carried a thirty-minute interview on the opinion survey.

State *newspapers* were hit with thirteen different news releases during the campaign. The Lansing State Journal ran two feature articles and a copy of the questionnaire while the Detroit Times printed the questionnaire, an editorial and several articles on the survey.

Bulletin Board announcements, letters to organizations, and telegrams to hospital chiefs of staffs, urging participating in the survey, filled up what blank spaces were left in the all-encompassing campaign. Even the society's booth at the state fair gave away information sheets on the survey.

By the time results were released—backed up by the action of the house of delegates—(see Journal of the AMA, January 4, 1958) everybody in Michigan was well aware that their doctors are not only concerned about the cost of medical care, but doing something about it.—AMA *Public Relations. Bulletin,* January, 1958.

MEDICAL EDUCATION WEEK

The week of April 20-26, 1958, has been designated as Medical Education Week.

EQUIPMENT LOAN SERVICE

When a Broome County (N.Y.) minister appealed to the local medical society for sickroom equipment for a parishioner, the society followed it up by *compiling a complete list of items available through local charitable and service organizations.* The list contains details on whom to contact, loan restrictions, and how to transpoft the equipment. A very good suggestion—worth following.

DOCTORS NEED REMINDERS

The American Medical Association, through its Public Relations Department, has prepared and made available upon request two polio reminder cards: *A* to have the shots, and *B* time for the third shot. Please indicate the number of each needed. Every unvaccinated person under forty should have a reminder card from his doctor.

relaxes both mind & muscle

without impairing mental or physical efficiency





well tolerated, relatively nontoxic / no blood dyscrasias, liver toxicity, Parkinson-like syndrome or nasal stuffiness / well suited for prolonged therapy

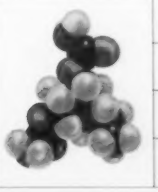
Supplied: 400 mg. scored tablets, 200 mg. sugar-coated tablets. *Usual dosage:* One or two 400 mg. tablets t.i.d.

For anxiety, tension and muscle spasm in everyday practice.

Miltown®

tranquilizer with muscle-relaxant action

2-methyl-2-n-propyl-1,3-propanediol dicarbamate



THE ORIGINAL MEPROBAMATE

DISCOVERED & INTRODUCED BY

WALLACE LABORATORIES

NEW BRUNSWICK, NEW JERSEY

CM-6058



Anxiety of pregnancy

'Miltown' therapy resulted in complete relief from symptoms in 88% of pregnant women complaining of insomnia, anxiety, and emotional upsets.*

'Miltown' (usual dosage: 400 mg. q.i.d.) *relaxes both mind and muscle* and alleviates somatic symptoms of anxiety, tension, and fear.

'Miltown' therapy does not affect the autonomic nervous system and *can be used with safety throughout pregnancy.**

*Belafsky, H. A., Breslow, S. and Shangold, J. E.: Meprobamate in pregnancy. Obst. & Gynec. 9:703, June 1957.

Miltown®



THE ORIGINAL MEPROBAMATE
DISCOVERED & INTRODUCED BY
WALLACE LABORATORIES
NEW BRUNSWICK, NEW JERSEY

CM-5571

MY DAD— HE HURT HIS BACK REAL BAD

"It happened at work while he was putting oil in something"



"He told Mom his shoulder felt like it was on fire"



"He couldn't swing a bat without hurting"



"But Doctor gave him some nice pills--and the pain went away fast"



"Dad said we'd play ball again tomorrow when he comes home"



AND THE PAIN WENT AWAY FAST

FOR PAIN

Percodan®

(Salts of Dihydrohydroxycodeinone and Homatropine, plus APC) **TABLETS**

ACTS FASTER...
usually within 5-15 minutes

LASTS LONGER...
usually for 6 hours or more

MORE THOROUGH RELIEF...
permits uninterrupted sleep through the night

RARELY CONSTIPATES...
excellent for chronic or bedridden patients

and now... **NEW**

Percodan®-Demi

VERSATILE

New "demi" strength permits dosage flexibility to meet each patient's specific needs. PERCODAN-DEMI provides the PERCODAN formula with one-half the amount of salts of dihydrohydroxycodeinone and homatropine.

AVERAGE ADULT DOSE: 1 tablet every 6 hours. May be habit-forming. Available through all pharmacies.

Each PERCODAN®-Tablet contains 4.50 mg. dihydrohydroxycodeinone hydrochloride, 0.38 mg. dihydrohydroxycodeinone terephthalate, 0.38 mg. homatropine terephthalate, 224 mg. acetylsalicylic acid, 160 mg. phenacetin, and 32 mg. caffeine.

Literature? Write

Endo® **ENDO LABORATORIES**
Richmond Hill 18, New York

®U.S. Pat. 2,628,185

Heart Beats

ABSTRACTS OF PAPERS DUE JUNE 13 FOR 1958 AHA SCIENTIFIC SESSIONS

The 1958 Scientific Sessions of the American Heart Association are scheduled to be held October 24-26 at the Civic Center, San Francisco. Applications are now obtainable for the presentation of papers or for exhibit space by writing to F. J. Lewy, M.D., Assistant Medical Director, American Heart Association, 44 East 23rd Street, New York 10, N. Y.

Papers intended for presentation must be based on original investigation in, or related to, the cardiovascular field. Abstracts of such papers, under no circumstances to exceed 300 words, are due before June 13, 1958. They must be submitted in triplicate on forms which will be supplied to applicants.

ARTERIOSCLEROSIS SOCIETY TO MEET WITH HEART ASSOCIATION

The American Society for the Study of Arteriosclerosis will hold its 1958 Annual Meeting simultaneously with the 31st Annual Scientific Sessions of the American Heart Association in San Francisco, October 24-26. Several joint programs are being planned at that time.

PUBLICATIONS AND TEACHING AIDS AVAILABLE FOR PHYSICIANS

A revised, comprehensive catalog, Publications and Teaching Aids for Physicians, is available free of charge from the national office of the American Heart Association or from local Heart Associations. Listed among the catalog's teaching aids are pamphlets, monographs, films, slides, recordings and other audiovisual materials. It points out that the Heart Association's educational programs include scientific sessions, postgraduate courses, teaching days and annual symposia. Brief descriptions of each item and prices are also included.

BOOK ON RHEUMATIC FEVER IS COMPLETELY REVISED

A completely revised edition of the book, Epidemiology of Rheumatic Fever, by Dr. John R. Paul, Professor of Preventive Medicine at Yale University School of Medicine, has been prepared with the assistance of an ad hoc Advisory Committee of the American Heart Association's Council on Rheumatic Fever and Congenital Heart Disease. Rewritten in the light of recent knowledge on the spread and causes of rheumatic fever, the 187-page volume contains information of particular value to pediatricians, health officers and rheumatic fever committees. It is available through the Michigan Heart Association.

WORK-SIMPLIFICATION CLASSES NOW SCHEDULED THROUGH JUNE

Heart of the Home Work-Simplification classes for women with heart disease have been scheduled throughout the State for the next six months. The classes, which are sponsored by the Michigan Heart Association in co-operation with Michigan State and Wayne State Universities, will, at the conclusion of this year's classes, have covered every county in Michigan at least once.

Physicians are urged to make referrals to these classes.

Any woman may register for the classes, but women with cardiac conditions will be given preference. The schedule through June is a follows:

GREATER DETROIT AREA CLASSES
(Register with the Michigan Heart Association)

DATE	*TIME*	*PLACE*
March 4, 11, 18, 25	7 to 9 P.M.	Wayne State University
March 5, 12, 19, 26	9:30 to 11:30 A.M.	Grosse Pointe Community Ser. 43 Grosse Pointe Blvd.
March 7, 14, 21, 28	9:30 to 11:30 A.M.	Lipke Center, 19320 Van Dyke
April 1, 15, 22, 29	9:30 to 11:30 A.M.	Wayne State University
April 3, 17, 24, May 1		V. F. W. Hall, Belleville
May 8, 15, 22, 29	1 to 3 P.M.	Civic Assoc. Bldg., 9611 Hubbard Livonia
May 6, 13, 20, 27	9:30 to 11:30 A.M.	Maxine Elemen. School St. Clair Shores

OUTSTATE CLASSES
(Register with your County Home Demonstration Agent)

DATE	*TIME*	*COUNTY*
Mar. 11, 13, 18, 20	Afternoon	Gladwin
Mar. 12, 14, 19, 21	Morning	Ogemaw
April 8, 10, 15, 17	Afternoon	Muskegon
April 9, 11, 16, 18	Morning	Mason
April 22, 29, May 6, 13	Afternoon	Benzie
April 23, 30, May 7, 14	Morning	Grand Traverse
April 24, May 1, 8, 15	Morning	Emmet
May 20, 27, June 10, 17	Afternoon	Cheboygan
May 21, 28, June 11, 18	Morning	Alpena
May 22, 29, June 12, 19	Morning	Alcona

For further information or copies of the material listed above, write to the Michigan Heart Association, Doctors' Building, 3919 John R, Detroit 1, Michigan.

"STROKES" FILM AVAILABLE

President Eisenhower's latest illness has stimulated interest in the Michigan Heart Association's new film, *Strokes*. The color film, approximately six minutes long, provides an excellent visual aid to physicians addressing lay groups and is especially suitable for television use.

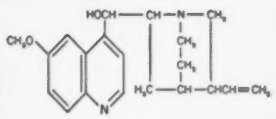
Progress in SYNTHETIC CHEMISTRY
EQUALS
Progress in CHEMOTHERAPEUTICS

"It has a high degree of clinical safety... It is considered to be the preferred antimalarial drug for treatment of disorders of connective tissue, because of the low incidence of gastrointestinal distress as compared to that with chloroquine phosphate."[1]

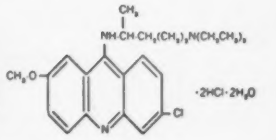
"... Plaquenil is decidedly less toxic and better tolerated by the average patient, even in high dosage, than is chloroquine."[2]

"... the least toxic of its class ..."[3]

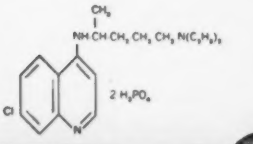
QUININE



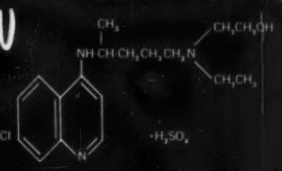
ATABRINE® HYDROCHLORIDE



ARALEN® PHOSPHATE



Now



Plaquenil® SULFATE

Remarkably effective in RHEUMATOID ARTHRITIS

SIDE EFFECTS MARKEDLY REDUCED

DOSE: **Initial** – 400 to 600 mg. (2 or 3 tablets) Plaquenil sulfate daily.
Maintenance – 200 to 400 mg. (1 or 2 tablets) daily.

SUPPLIED: Tablets of 200 mg., bottles of 100.

Write for Booklet

Winthrop LABORATORIES NEW YORK 18, N. Y.

REFERENCES:

1. Scherbel, A.L., Schuchter, S.L., and Harrison, J.W.: *Cleveland Clin. Quart.* 24:98, Apr., 1957.
2. Editorial: *Bull A. Mil. Dermatologists*, The Shock Section 5:25, Nov., 1956.
3. Cornbleet, Theodore: Arch. Dermat. 73:572, June, 1956.

Atabrine (brand of quinacrine), Aralen (brand of chloroquine), and Plaquenil (brand of hydroxychloroquine), trademarks reg. U.S. Pat. Off.

AMA Washington Letter

THE MONTH IN WASHINGTON

Those who are trying to follow the course of medical legislation, find an unusual situation developing in this session of Congress. All of Washington is being subjected to forces, some completely new, that often work at cross-purposes to each other. The result could be a moratorium on health legislation—or again it could be a flood of new laws.

At the start of the session, a new-born interest in science completely dominated the scene—by a frantic spending of billions of dollars we would overtake Russia. That was the theme in Washington, and it persisted despite a few quiet voices that asked whether Russia really had far outdistanced the U.S. or was merely exploiting a slight advantage.

Even before the American satellite started on its orbit, some of the panic had subsided, and most of the legislators had decided that advent of the space age had not removed all of the old problems and opportunities in legislation and politics. The familiar issues were still there, medical panaceas included.

The shock of Russian achievements will, at any rate, produce legislation designed to shore up our educational system. This seems to be generally accepted. For the medical profession, two provisions are of major interest. Scholarships would be either four years—possibly six—offering some assistance to premed students and in some cases to those in their first year of medical school. Also, fellowships would be available for medical and other graduates if they wanted to teach or go into research.

The administration's idea was a program that would cost a billion dollars; several leading Democrats joined in a bill proposing three billion dollars as a stimulant to mathematics and science.

But there are other factors to be reckoned with. For the first time a President set down in black and white in his budget just how he proposed to withdraw the federal government from some activities, or limit its participation, and turn the programs back to the states. Mr. Eisenhower wants to slow down on the Hill-Burton hospital construction program and change its emphasis, he wants to mesh in some veterans' benefits with social security payments, he would have the states do more and the U.S. less in public assistance (where medical payments are a growing factor), and he hopes to get Congress to drop the $50 million a year program of grants to help build water treatment plants.

Whether Congress will follow the President's lead in the back-to-the-states movement is another question. At least he has said specifically what he thinks should be done, and when.

There was no expectation that the Russian scare would dilute politics this election year—and it hasn't. If anything, the partisans are struggling harder than ever to make records that will reflect glory on them next November. Some of course, would be pressing for their projects regardless of the election.

So this is the prospect, in brief:

The Defense Department and science will get the major attention and the major money, but some may spill over into medicine.

There is some interest in a tight domestic budget and returning certain activities to the states, but old fashioned politics combined with a fear of a continuing recession may again open up the federal purse.

Medical legislation, always a popular subject, may get more and more attention as the session rolls on. If so, the Forand bill among others would come immediately to the fore.

Notes

Several developments in the legislative field on Jenkins-Keogh bills came early in the session. The American Thrift Assembly, representing some 10 million self-employed, urged favorable House Ways and Means action, and the American Medical Association pointed out that the proposal for tax deferment of money paid into retirement plans could help solve the problem of maldistribution of physicians.

In the Senate, a majority of the Small Business Committee introduced a tax relief bill with a J-K provision. The section would allow anyone not now benefitting from a qualified pension plan to set aside 10 per cent of annual income ($1,000, maximum). The bill went to Senate Finance Committee.

* * *

Six members of the Health Resources Advisory Committee have been named by Defense Mobilizer Gordon Gray. The committee, headed by Dr. Elmer Hess, advises government on health and medical problems in time of war or national emergency. Members are Dr. George C. Whitecotten, Oakland, Calif., Dr. Franklin Yoder, Cheyenne, Wyo., Dr. Mary Louise Gloechner, Conshohocken, Pa., Harold Oppice, D.D.S., Chicago, Ill., Dr. William Walsh, Washington, D. C., and Frances Graff, R.N., Grand Rapids, Mich.

NOW—FROM ABBOTT LABORATORIES



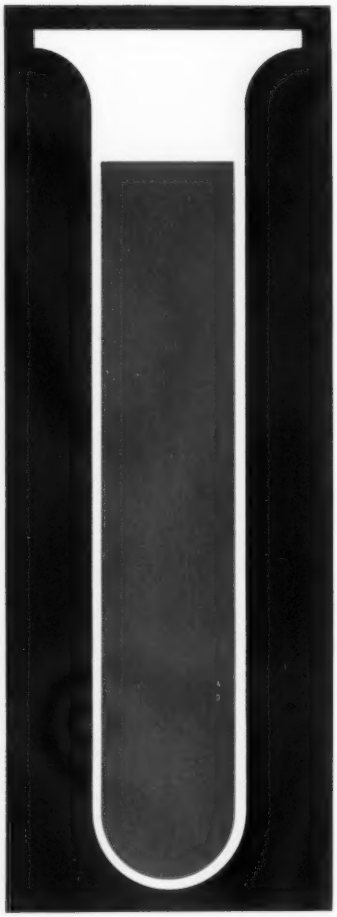
AN ANTIBIOTIC TRIAD —FOR THE CONTROL OF ALL COCCAL INFECTIONS

FILMTAB*

Erythrocin®

STEARATE (Erythromycin Stearate, Abbott)

against staph-, strep- and pneumococci



Indications

ERYTHROCIN is indicated in treating infections caused by staphylococci, streptococci (including enterococci), and pneumococci. Indicated also, in treating infections that have become resistant to other antibiotics. May be used for patients who are allergic to penicillin or other antibacterials.

Dosage

Usually administered in a total daily dose of 1 to 2 Gm., depending on severity of infection. Suggested dose is 250 mg. every six hours; for severe infections, usual dose is 500 mg. every six hours.

Supplied

In bottles of 25 and 100 *Filmtabs* (100 and 250 mg.). Also, in tasty, cinnamon-flavored oral suspension, in 75-cc. bottles. Each 5-cc. teaspoonful represents 100 mg. of ERYTHROCIN activity.

*Filmtab—Film-sealed tablets, Abbott; pat. applied for.



REMARKABLE EFFECTIVENESS PLUS A SAFETY RECORD UNMATCHED IN SYSTEMIC ANTIBIOTIC THERAPY TODAY

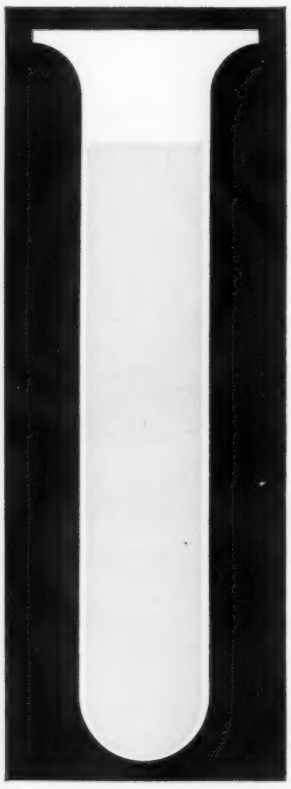
Actually, after almost six years of extensive use, there has not been a single report of a serious reaction to ERYTHROCIN. And, after all this time, the incidence of resistance to ERYTHROCIN has remained exceptionally low.

You'll find ERYTHROCIN is highly effective against the majority of coccal infections and may also be used to counteract complications from severe viral attacks. It comes in *Filmtabs* and in Oral Suspension. Abbott

602069

Compocillin-V®

for those penicillin-sensitive organisms



Indications

Against all penicillin-sensitive organisms. For prophylaxis and treatment of complications in viral conditions. And as a prophylaxis in rheumatic fever and in rheumatic heart disease.

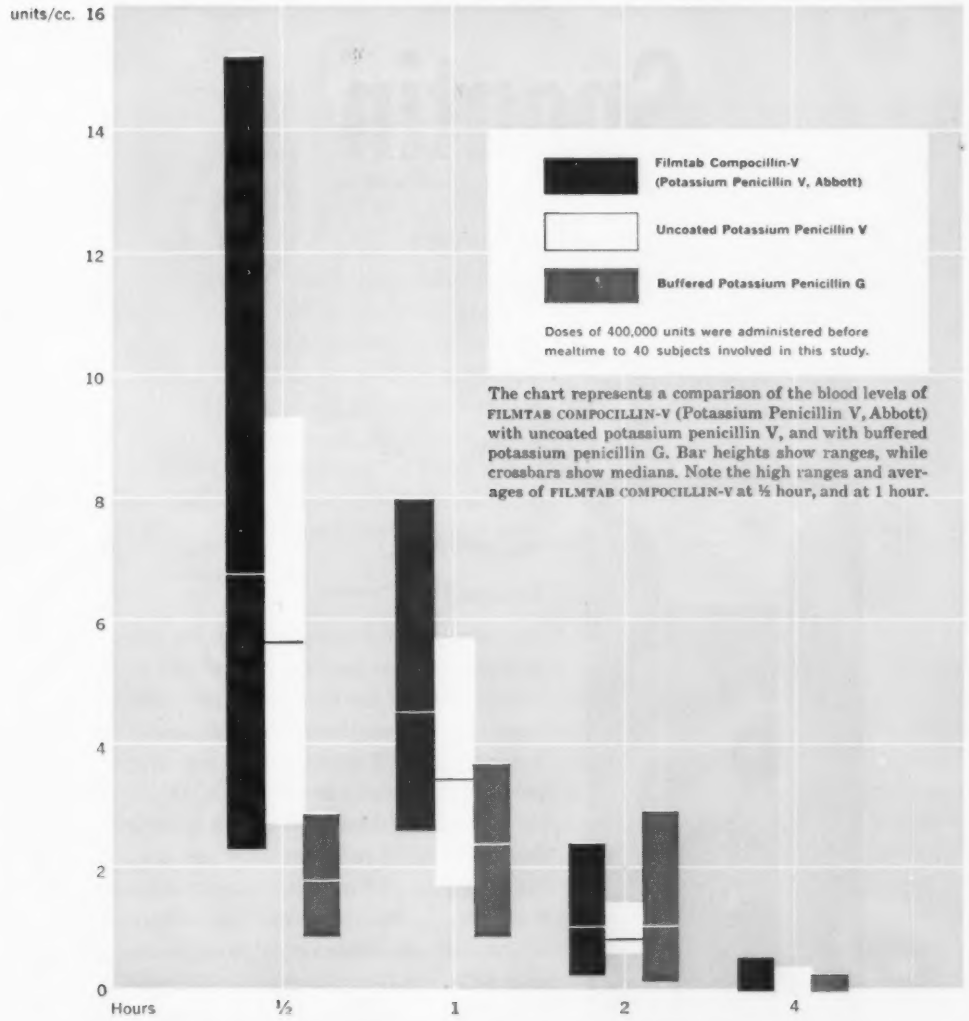
Dosage

Depending on the severity of the infection, 125 to 250 mg. (200,000 to 400,000 units) every four to six hours. For children, dosage is determined by age and weight.

Supplied

Filmtabs COMPOCILLIN-V (Potassium Penicillin V, Abbott) come in 125 mg. (200,000 units), bottles of 50; and in 250 mg. (400,000 units), bottles of 25. Oral Suspension COMPOCILLIN-V (Hydrabamine Penicillin V, Abbott), contains 180 mg. per 5-cc. teaspoonful, in 40-cc. and 80-cc. bottles.

THE HIGHER BLOOD LEVELS OF COMPOCILLIN-V
—IN EASY-TO-SWALLOW FILMTABS AND TASTY, ORAL SUSPENSION



The chart represents a comparison of the blood levels of FILMTAB COMPOCILLIN-V (Potassium Penicillin V, Abbott) with uncoated potassium penicillin V, and with buffered potassium penicillin G. Bar heights show ranges, while crossbars show medians. Note the high ranges and averages of FILMTAB COMPOCILLIN-V at ½ hour, and at 1 hour.

Now, with *Filmtab* COMPOCILLIN-V, patients get (and within minutes) fast, high penicillin concentrations. Note the blood level chart.

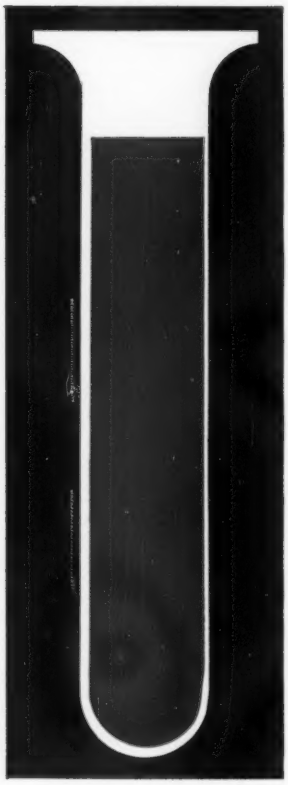
COMPOCILLIN-V is indicated whenever penicillin therapy is desired. It comes in two highly-acceptable forms. *Filmtab* COMPOCILLIN-V offers two therapeutic dosages (125 and 250 mg.). Patients find *Filmtabs* tasteless, odorless and easy-to-swallow. For children, COMPOCILLIN-V comes in a tasty, banana-flavored suspension. It's ready-mixed – stays stable for at least 18 months.

Abbott

Spontin®

(Ristocetin, Abbott)

and when coccal infections hospitalize the patient



Indications

SPONTIN is indicated for treating gram-positive bacterial infections. Clinical reports have indicated its effectiveness against a wide range of staphylococcal, streptococcal and pneumococcal infections. It can be considered a drug of choice for the immediate treatment of serious infections caused by organisms resistant to other antibiotics.

Dosage

Recommended dosage depends on the sensitivity of the microorganism and on the severity of the disease under treatment. For pneumococcal and streptococcal infections, a dosage of 25 mg./Kg. per day will usually be adequate. Majority of staphylococcal infections will be controlled by 25 to 50 mg./Kg. per day. However, in endocarditis due to relatively resistant strains or where vegetations or abscesses occur, dosages as high as 75 mg./Kg. per day may be used. It is recommended that the daily dosages be divided into two or three equal parts at eight- or twelve-hour intervals.

Supplied

SPONTIN is supplied as a sterile, lyophilized powder, in vials representing 500 mg. of ristocetin activity.

803070

Say you saw it in the Journal of the Michigan State Medical Society

A LIFESAVING ANTIBIOTIC AFTER OTHER ANTIBIOTICS HAD FAILED



SPONTIN comes to the medical profession with a clinical history of dramatic results – cases where the patients were given little chance of survival.

During these careful, clinical investigations, lives were saved after weeks (and sometimes months) of antibiotic failures. These were the cases where the infecting organisms had become resistant to present-day therapy. And, just as important, were the good results found against a wide range of gram-positive coccal infections.

Essentially, SPONTIN is a drug for hospital use, for patients with potentially dangerous infections. In its present form, SPONTIN is administered intravenously using the drip technique. Dosage may be dissolved in 5% dextrose in water or in any isotonic or hypotonic saline solution. Some of the important therapeutic points of SPONTIN include:

1. successful short-term therapy for acute or subacute endocarditis
2. new antimicrobial activity – no natural resistance to SPONTIN was found in tests involving hundreds of coccal strains
3. antimicrobial action against which resistance is rare – and extremely difficult to induce
4. bactericidal action at effective therapeutic dosages.

SPONTIN is truly a lifesaving antibiotic. It could save the life of one of your patients – does your hospital have it stocked?

Abbott

AMA News Notes

THE NEW TODAY'S HEALTH

Today's Health, AMA's popular health magazine, is having its face lifted! In the coming months, you'll see many changes in the magazine—a new logo (title line), new cover layout, tint block "news" page, broader editorial base, new editorial style and a completely new inside format. Since the AMA's Board of Trustees approved a reorganization plan for the magazine, the following changes in staff have been made: new editor James M. Liston, formerly special feature editor of *Better Homes and Gardens;* new associate editors—Dennis Orphan, previously associate editor of McGraw-Hill's *Industrial Distribution*, and William Vath, formerly managing editor of National Safety Council's *Safety News;* production co-ordinator Robert Hendrickson, previously with *Popular Mechanics Magazine*.

In addition, *Today's Health* now has its own advertising review committee—Leo E. Brown, AMA public relations director, chairman; Dr. Austin Smith, editor of *Journal of the AMA;* C. Joseph Stetler, director of Law Department, and W. W. Hetherington, executive publisher, *Today's Health*.

On all counts, 1957 was a good year for *Today's Health* . . . advertising lineage increased more than 30 per cent over 1956 with dollar volume showing a 40 per cent gain; 1956 advertising was renewed at a rate exceeding 90 per cent; fifty-one new advertising accounts were established in 1957; circulation continued to grow, topping the 400,000 mark for nine of the twelve issues.

AID IN BATTLING THE 1040 FORM

Don't let those income tax forms get you down! Now's the time to write to the AMA Law Department for its new booklet—"The Federal Income Tax Guide for Physicians"—for answers to some of your most perplexing tax problems. This timely new booklet has been compiled from court decisions as well as rulings, regulations and publications of the Internal Revenue Service. It has been designed to give physicians a better understanding of their rights and obligations under federal income tax laws. The Law Department staff has only one word of advice: Do not consider this booklet as a *substitute* for the services of a personal tax advisor! Incidentally, this material is also scheduled to appear in the *Journal of the AMA*.

CONFERENCE ON PERINATAL MORTALITY

The Committee on Maternal and Child Care of the AMA's Council on Medical Service will meet March 22-23, in Chicago. The second day of this meeting will be devoted to a joint conference with North Central area physicians interested in problems concerning perinatal mortality and morbidity. Topics to be discussed include terms and definitions used in perinatal mortality studies, organization and operation of such studies and classification of causes of perinatal deaths.

This will be the second regional meeting on this subject. Representatives of state and local medical society committees, state and local health departments and individual hospitals from the following states have been invited: Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North and South Dakota and Wisconsin.

The Committee is working toward the development of a "Guide for Study of Perinatal Mortality and Morbidity" as an appropriate sequel to its 1957 publication, "Guide for Maternal Death Studies."

NEW RADIO HEALTH SERIES

To give your community a monthly report on the newest and best in medicine, the American Medical Association introduces its new radio transcription series —"Health Magazine of the Air" Based on current items from *Today's Health* magazine, the new 15-minute series features H. V. Kaltenborn, veteran newscaster and radio-TV commentator, and W. W. Bauer, M.D., AMA Bureau of Health Education director. The programs are produced by the Marshall Organization, Inc., under the direction of the Bureau.

Seasonal health spot announcements—three fifteen-seconds; three thirty-seconds, and two one-minute—will be presented on the reverse side of the platters. These spots will be given by popular movie personalities who contribute their time as a public service. The announcements will be presented in February by Peggy Wood of the "I Remember Mama" program.

First shipment of the new transcriptions was made to approximately 400 radio stations throughout the country in February. The platters will be released about the fifth day of each month from February through December, 1958, for immediate broadcast. Although the present selection of stations has been based on those previously airing AMA radio transcriptions, local medical societies may contact the Bureau of Health Education for further information regarding additional outlets.

MEETING ON PROBLEMS OF THE AGING

Problems of the aging and ways that the medical profession can assume leadership in helping to solve them will be discussed at a regional meeting of the AMA's Committee on Aging, March 29-30, in Birmingham, Alabama. Representatives of the state medical associations of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee have been invited to attend the conference sponsored by the Council on Medical Service. This meeting will be similar to those held previously in Seattle, Dallas and Philadelphia. Proceedings of some of these earlier meetings have been published and are available on request from the Council.

See anybody here you know, Doctor?



I'm just too much

AMPLUS®
for sound obesity management
dextro-amphetamine plus vitamins
and minerals

I'm too little

STIMAVITE®
stimulates appetite and growth
vitamins B_1, B_6, B_{12}, C and L-lysine

I'm simply two

OBRON®
a nutritional buildup for the OB patient

OBRON® HEMATINIC
when anemia complicates pregnancy

And I'm getting brittle

NEOBON®
5-factor geriatric formula
hormonal, hematinic and
nutritional support

With my anemia,
I'll never make it up
that high

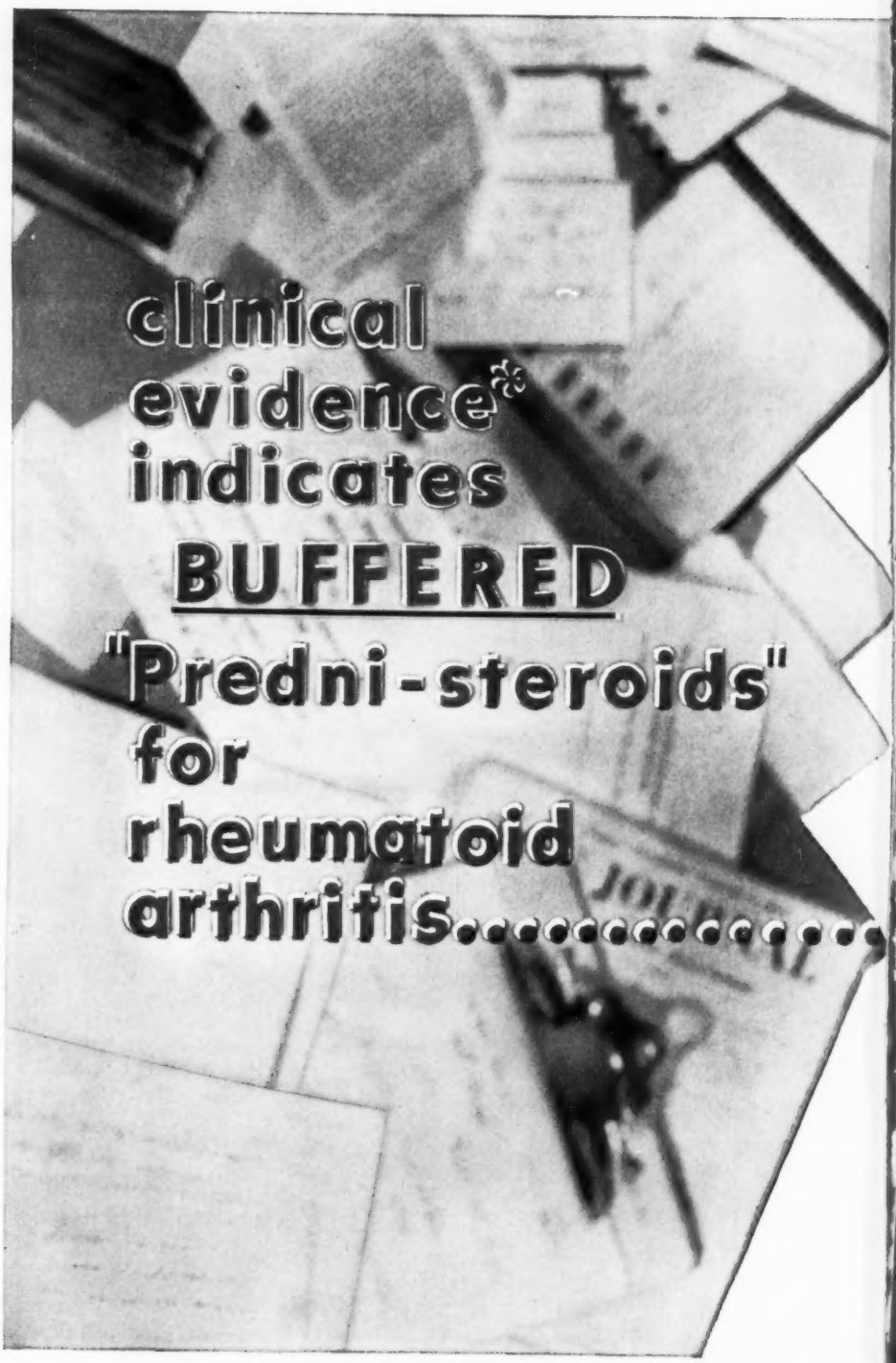
ROETINIC®
one capsule a day, for all treatable anemias

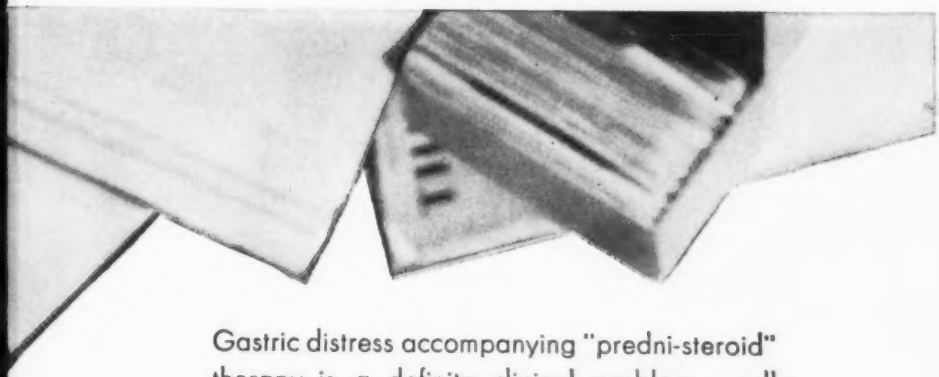
HEPTUNA® PLUS
when more than a hematinic is indicated

(Prescription information on request)

. . . solve their problems with a nutrition product from ROERIG

New York 17, New York
Division, Chas. Pfizer & Co., Inc.


clinical
evidence*
indicates
BUFFERED
"Predni-steroids"
for
rheumatoid
arthritis.....



Gastric distress accompanying "predni-steroid" therapy is a definite clinical problem—well documented in a growing body of literature.

*"In view of the beneficial responses observed when antacids and bland diets were used concomitantly with prednisone and prednisolone, we feel that these measures should be employed prophylactically to offset any gastrointestinal side effects."—Dordick, J. R. *et al.*: N. Y. State J. Med. 57:2049 (June 15) 1957.

*"It is our growing conviction that all patients receiving oral steroids should take each dose after food or with adequate buffering with aluminum or magnesium hydroxide preparations."—Sigler, J. W. and Ensign, D. C.: J. Kentucky State M. A. 54:771 (Sept.) 1956.

*"The apparent high incidence of this serious [gastric] side effect in patients receiving prednisone or prednisolone suggests the advisability of routine co-administration of an aluminum hydroxide gel."—Bollet, A. J. and Bunim, J. J.: J. A. M. A. 158:459 (June 11) 1955.

One way to make sure that patients receive full benefits of "predni-steroid" therapy plus positive protection against gastric distress is by prescribing CO-DELTRA or CO-HYDELTRA.

Co-Deltra®
PREDNISONE BUFFERED
multiple compressed tablets

provide all the benefits of "Predni-steroid" therapy—plus positive antacid protection against gastric distress

Co-Hydeltra®
PREDNISOLONE BUFFERED



2.5 mg. or 5.0 mg. of prednisone or prednisolone, plus 300 mg. of dried aluminum hydroxide gel and 50 mg. magnesium trisilicate, in bottles of 30, 100, 500.

MERCK SHARP & DOHME Division of MERCK & CO., Inc., Philadelphia 1, Pa. MSD

PR REPORT

ORIGINS OF SELF REGULATION IN MEDICINE: PART II

By Gaylord S. Bates, M.D.

In every civilization, the priest, the healer, and the magician were united in one person at first. They split into three components with the physician obtaining greater material rewards for his services. We know from the Ebers papyrus that by 1600 B.C. priest, physician and magician were separate persons. By 600 B.C. the Greek physician was a layman. With this separation it became apparent that the physician, being the repository of knowledge and skill required by society to keep it fit to survive and protect itself, had an interest in conflict with that of society. With a pecuniary interest in the ills of society could a physician honestly desire to see society in perfect health? Ideally the answer was "yes," but personal interest said "no." Society through government, the instrument it creates to enforce the people's will, set about protecting itself from this potential danger. The usual form was by enacting fee codes and by requiring certain standards of training and skill before granting permission to practice medicine. The oldest document of the kind is to be found in the Code of Hammurapi, about 1900 B.C. For example:

"215. If a physician treat a man for a severe wound with a bronze knife and heal the man, or if he open an abscess (near the eye) with a bronze knife, and save the eye, he shall receive ten shekels of silver."

"216. If he (the patient) be a freedman, he shall receive five shekels."

"217. If it be a man's slave, his owner shall pay the physician two shekels of silver."

"218. If a physician treat a man for a severe wound with a bronze knife and kill him, or if he open an abscess (near the eye) and destroy the eye, one shall cut off his hands."

"219. If a physician treat the slave of a freedman for a severe wound with a bronze knife, and kill him, he must replace the slave with another."

You will note two features that have not changed in substance to this day, though moderated in form. The first is a sliding scale of fees. The second is accountability of the physician to society for due skill and knowledge in the treatment of its members. Similar codes were found among the Persians, Jews and Hindus. In the Greek era about 600 B.C. medicine began to establish general principles of moral conduct and good taste in the practice of the art. These have come to us in the Hippocratic Collection

(Continued on Page 338)

This is the second installment of a paper presented before the Detroit Academy of Medicine at the Dearborn Inn, November 12, 1957.

PUBLIC RELATIONS BEGINS IN THE DOCTOR'S OFFICE

Second installment of a paper by

R. Wallace Teed, M.D., Ann Arbor,
Chairman, MSMS Public Relations Committee

The Patient Meets the Assistant

The first contact of the patient is usually with the doctor's assistant or receptionist, and her willingness to be helpful can make a good impression which will make the doctor's work easier. Every physician should take particular pains to indoctrinate his or her receptionist with the importance of patience and kindness in dealing with sick people, who are notoriously jumpy and unreasonable. Almost every sick person believes, probably subconsciously, that his illness is the worst thing that has ever happened to anybody, and that the physician should drop everything else and attend to his needs the moment he calls. The fact that other sick people have bargained for the time of the physician is beside the point. However, the receptionist must try to explain the situation and make the patient feel that everything is being done to attend to his problem. If the schedule is full, she can agree to call the patient in case of a cancellation or "no-show," and in other ways convince the patient that she is trying to help. She should recognize that sick people frequently revert to childishness, and that their petulance makes them more prone to criticize.

The office itself can contribute to a good patient impression. Women especially like to see the place clean; an attractive decor and comfortable chairs add to the feeling of well-being. Interesting, up-to-date magazines and good lighting are essential. In my own office, six months is the maximum any magazine is left on the table. The old saw about ancient magazines in the doctor's office is too frequently well-founded. Probably the least tasteful habit is that of leaving medical journals on the waiting room table.

One should also avoid a too-expensive lay-out. People generally assume that this is a needless extravagance which is paid for by them.

a new high in
anti-inflammatory effects
with lower dosage
(averages 1/3 less than
prednisone)

The
Achievements
of

Aristocort

Triamcinolone LEDERLE

a new low in the collateral
hormonal effects associated
with all previous corticosteroids

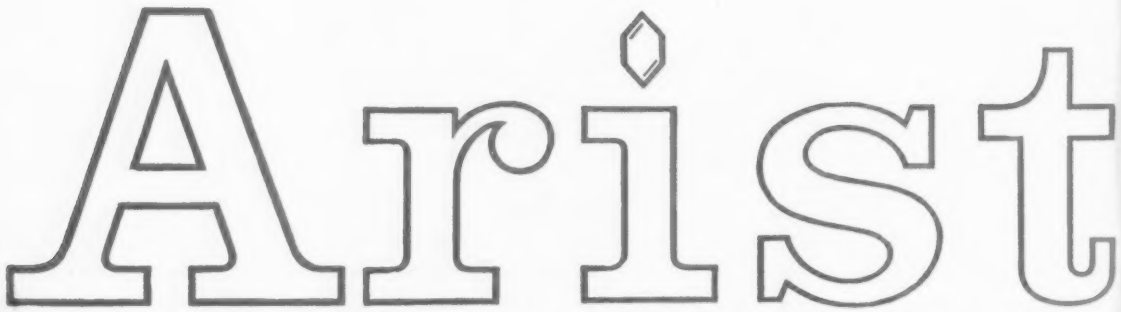
- No sodium or water retention
- No potassium loss
- No interference with psychic equilibrium
- Low incidence of peptic ulcer and osteoporosis

Aristocort is available in 2 mg. scored tablets (pink), bottles of 30, and 4 mg. scored tablets (white), bottles of 30 and 100.

Lederle

The Achievement in Skin Diseases: In a study of 26 patients with severe dermatoses, ARISTOCORT was proved to have potent anti-inflammatory and antipruritic properties, even at a dosage only ⅔ that of prednisone.[1]... Striking affinity for skin and tremendous potency in controlling skin disease, including 50 cases of psoriasis, of which over 60% were reported as *markedly improved*[2]... absence of serious side effects specifically noted.[1,2,3]

The Achievement in Rheumatoid Arthritis: Impressive therapeutic effect in most cases of a group of 89 patients[4]...6 mg. of ARISTOCORT corresponded in effect to 10 mg. of prednisone daily (in addition, gastric ulcer which developed during prednisone therapy in 2 cases disappeared during ARISTOCORT therapy).[5]



1. Rein, C. R., Fleischmajer, R., and Rosenthal, A. L.: J. A. M. A. *165*:1821, (Dec. 7) 1957.
2. Shelley, W. B., and Pillsbury, D. M.: Personal Communication.
3. Sherwood, A., and Cooke, R. A.: Personal Communication.
4. Freyberg, R. H., Berntsen, C. A., and Hellman, L.: Paper presented at International Congress on Rheumatic Diseases, Toronto, June 25, 1957.
5. Hartung, E. F.: Personal Communication.
6. Schwartz, E.: Personal Communication.
7. Sherwood, A., and Cooke, R. A.: J. Allergy 28:97, 1957.
8. Hellman, L., Zumoff, B., Kretshmer, N., and Kramer, B.: Paper presented at Nephrosis Conference, Bethesda, Md., Oct. 26, 1957.
9. Ibid.: Personal Communication.
10. Barach, A. L.: Personal Communication.
11. Segal, M. S.: Personal Communication.
12. Cooke, R. A.: Personal Communication.
13. Dubois, E. L.: Personal Communication.

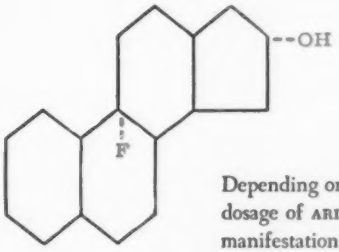
Say you saw it in the Journal of the Michigan State Medical Society

The Achievement in Respiratory Allergies: "Good to excellent" results in 29 of 30 patients with chronic intractable bronchial asthma at an average daily dosage of only 7 mg.[6]... Average dosage of 6 mg. daily to control asthma and 2 to 6 mg. to control allergic rhinitis in a group of 42 patients, with an actual reduction of blood pressure in 12 of these.[7]

The Achievement in Other Conditions: Two failures, 4 partial remissions and 8 cases with complete disappearance of abnormal chemical findings lead to characterization of ARISTOCORT as possibly the most desirable steroid to date in treatment of the nephrotic syndrome.[8,9]... Prompt decrease in the cyanosis and dyspnea of pulmonary emphysema and fibrosis, with marked improvement in patients refractory to prednisone.[10,11,12]... Favorable response reported for 25 of 28 cases of disseminated lupus erythematosus.[13]

ocort®

Triamcinolone LEDERLE



Depending on the acuteness and severity of the disease under therapy, the initial dosage of ARISTOCORT is usually from 8 to 20 mg. daily. When acute manifestations have subsided, maintenance dosage is arrived at gradually, usually by reducing the total daily dosage 2 mg. every 3 days until the smallest dosage has been reached which will suppress symptoms.

Comparative studies of patients changed to ARISTOCORT from prednisone indicate a dosage of ARISTOCORT lower by about ⅓ in rheumatoid arthritis, by ⅓ in allergic rhinitis and bronchial asthma, and by ⅓ to ½ in inflammatory and allergic skin diseases. With ARISTOCORT, no precautions are necessary in regard to dietary restriction of sodium or supplementation with potassium.

ARISTOCORT is available in 2 mg. scored tablets (pink), bottles of 30; and 4 mg. scored tablets (white), bottles of 30 and 100.

Lederle LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER NEW YORK

Say you saw it in the Journal of the Michigan State Medical Society

Important Announcement of Arteriosclerosis Treatment

GEROT PHARMACEUTIKA, owners of United States Letters Patent #2-776-973 issued January 1957 to Gerhard Gergely of Vienna, Austria, have licensed MEYER AND COMPANY of Detroit, Michigan, to synthesize and market 3, 7-dimethyl-xanthine double salt in the United States of America.

3, 7-dimethyl-xanthine double salt of oleic acid and magnesium, a stable compound marketed in Austria since 1950 under the name "Perskleran" and used in the treatment of ARTERIOSCLEROSIS is being marketed by MEYER AND COMPANY under the trade name of "Athemol."

The product is now available in tablet form.

Literature and clinical samples are available on request.

MEYER AND COMPANY

Pharmaceutical Manufacturers

16361 Mack Ave.

Detroit 24, Michigan

ORIGINS OF SELF REGULATION IN MEDICINE: PART II

(Continued from Page 334)

embracing the Oath, Law, Precepts and Decorum. There was no compulsion to ethical practice in ancient Greece except the physician's genuine love of his craft, the general Greek view of morality rendering it quite unnecessary. It is significant that the principles expressed in the Hippocratic Code have been the ideal guides to ethical conduct for over 2000 years, and that practically every great leader in medicine through all the intervening years has echoed the same ethical precepts of the Hippocratic writing. The Oath itself was not a code of conduct for physicians as we regard it today, but a pledge taken by a pupil when he bound himself to a master for the period of study requisite to enter the profession of healing. It set ethical standards which no governmental authority could enforce.

In 46 B.C., Julius Caesar relieved physicians of taxation, the duty of serving in civil office, of military service, and of taking lodgers. However, there was no rule of fitness, so anyone could call himself a healer. Under Antoninus Pius a plan was established whereby in every city, depending upon its size, only a certain number of physicians received the privilege of practice. Now one had to prove his fitness before the common council of the city in order to obtain the approbation of the state. The Romans went one step farther in the next two centuries. Instruction in medicine was first a private matter. By the third century the state had not only placed lecture halls and workshops at the disposal of physicians but had begun to appoint instructors in medicine.

ST. CLAIR CMS ESTABLISHES HONORARY LECTURSHIP

As a tribute for the contribution of time and service given by Clarence D. Selby, M.D., to the St. Clair County Medical Society, the group established a continuing annual lectureship in his honor. The announcement was made at the Society's January meeting, by Donald A. Koch, M.D., who said in part, "Despite his years, as Secretary of our Society, Doctor Selby has given us energetic constructive leadership far beyond what the position demanded. Therefore, it is no more than cause and effect that we should stop to honor him. We know full well that honors from us are small in comparison to past honors, but they are no less real."

Society members contributed a sum of $2,000 and the Cancer Service of St. Clair County offered to provide up to $500 each year so that nationally prominent medical teachers might be obtained as speakers for the lectureship.

new for angina

PETN + ATARAX®

(PENTAERYTHRITOL TETRANITRATE) (HYDROXYZINE)

CARTRAX*

links
freedom from
anginal attacks

with a shelter of
tranquility

In pain. Anxious. Fearful. On the road to cardiac invalidism. These are the pathways of angina patients. For fear and pain are inexorably linked in the angina syndrome.

For angina patients—perhaps the next one who enters your office—won't you consider new CARTRAX? This doubly effective therapy combines PETN (pentaerythritol tetranitrate) for lasting vasodilation and ATARAX for peace of mind. Thus CARTRAX relieves not only the anginal pain but reduces the concomitant anxiety.

Dosage and supplied: begin with 1 to 2 yellow CARTRAX "10" tablets (10 mg. PETN plus 10 mg. ATARAX) 3 to 4 times daily. When indicated, this may be increased for more optimal effect by switching to pink CARTRAX "20" tablets (20 mg. PETN plus 10 mg. ATARAX.) For convenience, write "CARTRAX 10" or "CARTRAX 20." In bottles of 100. CARTRAX should be taken 30 to 60 minutes *before* meals, on a continuous dosage schedule. Use PETN preparations with caution in glaucoma.

"Cardiac patients who show significant manifestations of anxiety should receive ataractic treatment as part of the therapeutic approach to the cardiac problem."[1]

1. Waldman, S., and Pelner, L.: Am. Pract. & Digest Treat. 8:1075 (July) 1957.

*TRADEMARK

ROERIG

New York 17, New York
Division, Chas. Pfizer & Co., Inc.

Editorial Opinion

CHEMICAL TESTS FOR INTOXICATION

One of the most interesting contributions to the September issue of the *Journal of the Michigan State Medical Society,* by C. W. Muehleberger, discussed the use of chemical tests for alcoholic intoxication in Michigan law enforcement. The usually accepted concentration sufficient to cause intoxication is 0.15 per cent or more. Dr. Meuhlberger stated that 2,000 volumes of alveolar breath will contain the same amount of alcohol as one volume of blood, and that the test was simpler to perform than the blood concentration determination.

The United States Supreme Court has ruled that taking a specimen of blood from an individual arrested for drunken driving does not violate his rights as an individual.† Apparently Mr. Lester P. Dodd, legal counsel for the Michigan State Medical Society, had not read the Supreme Court decision when, in a letter to Secretary Bill Burns, he gave as his opinion that "a doctor has no right to draw a blood sample without the consent of the patient."‡ Dr. Muehlberger admits that there are technical if not legal difficulties in obtaining blood specimens for examination, but says that the measurement of the alcohol content of the breath or urine "are only slightly less reliable as an index of alcohol intoxication and . . . are amply accurate." For many reasons, the breath test is more satisfactory and more reliable than the urine test.

The use of chemical tests for alcoholic intoxication is of special interest in North Carolina. As has been stated before in this Journal,* in 1938 a presidential recommendation that our society sponsor such a test was unanimously approved by the House of Delegates—but our state legislature would not hear to its adoption. Since then, a number of states have required such a test and in all states it is accepted as reliable evidence. It has been used in Winston-Salem since July, 1951. That it may be beneficial to one arrested for drunken driving was evidenced by the fact that of the first eleven men arrested in Winston-Salem for drunken driving, two were sent to the hospital instead of to jail. It is possible that their lives were saved as a result.—Editorial, *North Carolina Medical Journal,* December, 1957.

†Breithaut v. Abram.

‡Muehlberger, C. W.: Use of Chemical Tests for Intoxication In Michigan Law Enforcement, J. Michigan M. Soc., 56:1127-1132 (Sept.) 1957.

*Editorial, North Carolina M. J., 17:325 (July) 1951.

SEEING ONLY THE TREES

One of the problems facing the directors of Michigan Medical Service is the non-participating physician. He is the doctor who has received the fee allotted as partial rather than full payment for the service rendered. This in itself is not a violation of the terms of contract if the patient's income is in excess of the income limit of the policy: but it is a violation of the spirit as well as the terms of contract if the income of the patient is at or below this stipulated limit. Moreover it creates the impression that the doctor is letting the program become a simple collection agency for his office.

The recent Opinion Study indicates that the physician who believes that no one but himself can set a fair and proper fee is in small minority. However, the spurious character of fixed income limits set by a third party has created another group. This is probably a minority, but this minority has certain justification for its position.

Blue Shield once enrolled entire groups in one income limit bulk policy: the hourly-rated employe and the executive alike. This is remembered by doctors. For many years the spokesmen for the large organized groups held their people within the minimal income limit of the policy when the actual income had risen considerably above that level. Everyone knew that the contract-identified income bore no relationship to fact. Doctors remembered this. During the decade of the Great Men there was no visible evidence of improvement of contract in terms of expanded service to policy holders or realism in the fee paid for service rendered. Doctors remembered this, too.

There have been rumbles that the presently-developing new contracts will differentiate between the participating and the non-participating

(Continued on Page 409)

in common mixed infections ...tetracycline phosphate alone

PANMYCIN* Phosphate

for children:

PANMYCIN KM TRADEMARK Syrup

BROAD-SPECTRUM TETRACYCLINE IN ITS MOST EFFICIENT FORM

Produces more tetracycline in the blood with no more in the dose. No calcium to depress blood levels.[1] Basic broad-spectrum therapy in bronchitis, pharyngitis, otitis media, tonsillitis, and other common respiratory infections.

1. Welch, H.; Wright, W. W.; and Staffa, A. W.: Antibiotic Med. & Clin. Therapy 4:620, 1957.

in potentially serious infections ...tetracycline phosphate plus novobiocin

PANALBA*

for children:

PANALBA KM TRADEMARK Granules

THE BREADTH OF PANMYCIN PHOSPHATE PLUS THE ANTIMICROCOCCAL DEPTH OF ALBAMYCIN†

Offers maximum antimicrobial action at the earliest possible moment. The antibiotic preparation of first resort in pneumonia of unknown etiology, carbuncles, multiple furunculosis, cellulitis, and infections resistant to previous therapy.

†TRADEMARK, REG. U. S. PAT. OFF. — THE UPJOHN BRAND OF CRYSTALLINE NOVOBIOCIN SODIUM

for the 7 monilia-susceptible types ...tetracycline phosphate plus nystatin

COMYCIN*

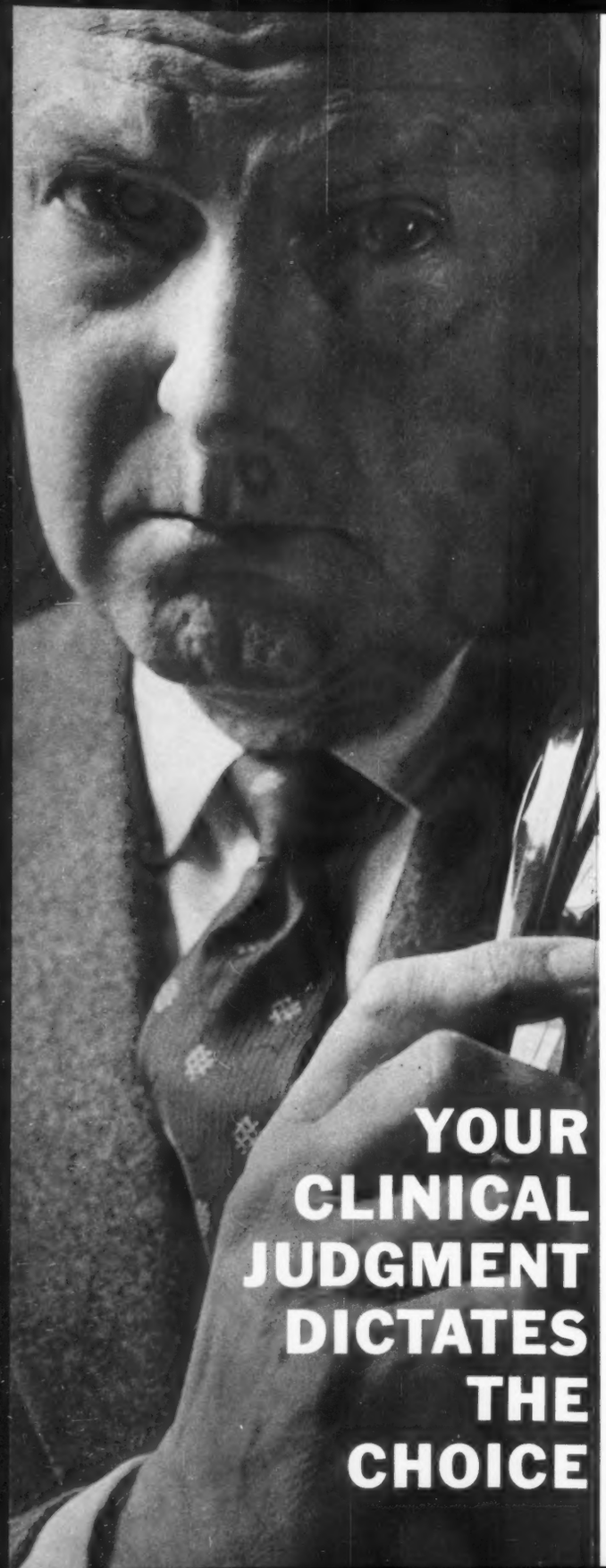
PANMYCIN PHOSPHATE PLUS THE ANTIMONILIAL PROTECTION OF NYSTATIN

The logical choice for patients requiring high doses of antibiotics or prolonged antibiotic therapy; for patients with previous monilial complications; for diabetics; patients on corticoids; the pregnant, debilitated, or elderly; and for infants, especially the premature.

Upjohn

The Upjohn Company, Kalamazoo, Michigan

*TRADEMARK, REG. U. S. PAT. OFF.



THE CHOICE OF A SYSTEMIC ANTIBIOTIC IS A MATTER OF CLINICAL JUDGMENT

1. PANMYCIN PHOSPHATE IN COMMON MIXED INFECTIONS

USUAL DOSAGE: ADULTS: 250 mg. every 6 hours or 500 mg. every 12 hours. CHILDREN: Approximately 8 mg. per pound of body weight daily, in four equally divided doses every 6 hours, or two equally divided doses every 12 hours.

SUPPLIED: CAPSULES: 250 mg. in bottles of 16 and 100; 125 mg. in bottles of 25 and 100.

PANMYCIN KM SYRUP: Each teaspoonful (5 cc.) contains tetracycline equivalent to 125 mg. tetracycline hydrochloride, and potassium metaphosphate, 100 mg., mint flavor, in 2 fluidounce and pint bottles.

2. PANALBA IN POTENTIALLY SERIOUS INFECTIONS

USUAL DOSAGE: ADULTS: 1 or 2 capsules three or four times a day, depending on the type and severity of the infection. CHILDREN: Proportionately less.

SUPPLIED: Each powder-blue-and-brown capsule contains Panmycin (tetracycline) Phosphate complex equivalent to 250 mg. tetracycline hydrochloride, and Albamycin (as novobiocin sodium) 125 mg.; in bottles of 16 and 100.

Also available: **PANALBA KM GRANULES** (Pediatric). When reconstituted, each 5 cc. teaspoonful contains Panmycin equivalent to tetracycline hydrochloride, 125 mg. and Albamycin (as novobiocin calcium) 62.5 mg., and potassium metaphosphate 100 mg.; in pleasantly flavored vehicle. Dosage is based upon amount of tetracycline—6 to 8 mg. per pound of body weight per day in 2 to 4 equally divided doses.

3. COMYCIN FOR THE 7 MONILIA-SUSCEPTIBLE TYPES

USUAL DOSAGE: ADULTS: 1 or 2 capsules every 6 hours. CHILDREN: Proportionately less.

SUPPLIED: Each brown-and-pink capsule contains tetracycline phosphate complex, equivalent to 250 mg. tetracycline hydrochloride; nystatin 250,000 units. In bottles of 16 and 100.

Upjohn

The Upjohn Company, Kalamazoo, Michigan

Meat...

and Protein Nutrition in Vascular Disease

Whether the eventual solution of the problem of atherogenesis will come out of the field of dietetics, biophysics, or pharmacology, one fact remains undeniable:

Adequate protein nutrition is considered of importance for the age group most commonly affected by disease of the vascular system, so that the demands of good nutritional health might be met.

Meat is outstanding among protein foods. It supplies all the essential amino acids, and closely approaches the quantitative proportions needed for biosynthesis of human tissue.

In addition, it is an excellent source of B vitamins, including B_6 and B_{12}, as well as iron, phosphorus, potassium, and magnesium.

When curtailment of fat intake is deemed indicated, meat need not always be denied the patient. Visible fat obviously should not be eaten. But the contained percentage of invisible (interstitial) fat is well within the limits of reasonable fat allowance.

The nutritional statements made in this advertisement have been reviewed by the Council on Foods and Nutrition of the American Medical Association and found consistent with current authoritative medical opinion.

American Meat Institute
Main Office, Chicago...Members Throughout the United States



BIFRAN®

with a
plus factor
in treating
the overweight

In addition to dulling the appetite, elevating the mood, and easing anxiety, Bifran tablets contain the plus factor, Cholan DH® (dehydrocholic acid, Maltbie). This hydrocholeretic maintains a normal flow of bile, thus avoiding the physiological consequences of low fat intake in the usual dietary program.

Prescribe Bifran tablets for your overweight patients.

Each Bifran tablet contains 5 mg. methamphetamine hydrochloride, 200 mg. dehydrocholic acid (Maltbie), and 15 mg. pentobarbital.

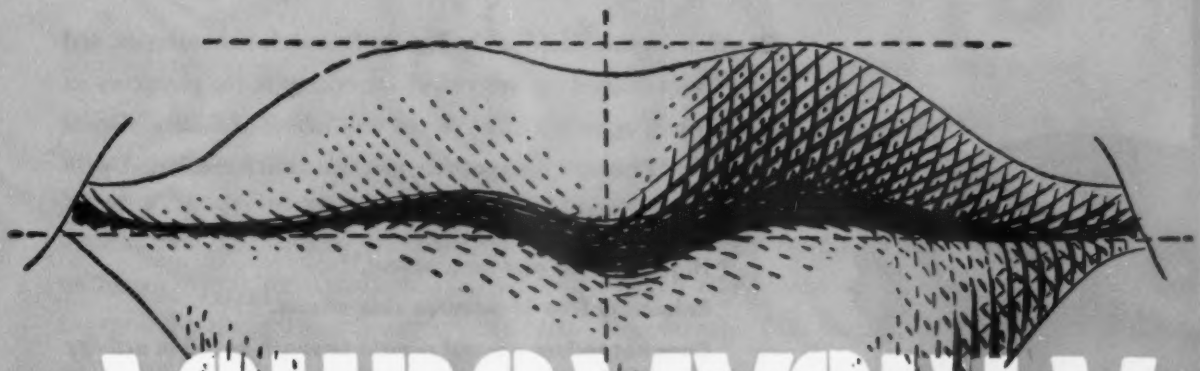
Supplied: Bottles of 100, 500, 1,000.

Maltbie MALTBIE LABORATORIES DIVISION • WALLACE & TIERNAN INC. • Belleville 9, N. J.

PEN-21

Say you saw it in the Journal of the Michigan State Medical Society

TASTY, FAST-ACTING ORAL FORM OF CITRATE-BUFFERED ACHROMYCIN V



ACHROMYCIN* V

TETRACYCLINE BUFFERED WITH SODIUM CITRATE

SYRUP

aqueous

ready-to-use

freely miscible

- accelerated absorption in the gastro-intestinal tract
- early, high peaks of concentration in body tissue and fluid
- quick control of a wide variety of infections
- unsurpassed, true broad-spectrum action
- minimal side effects
- well-tolerated by patients of all ages

ACHROMYCIN V SYRUP:
Orange Flavor. Each teaspoonful (5 cc.) contains 125 mg. of tetracycline, HCl equivalent, citrate-buffered. Bottles of 2 and 16 fl. oz.

DOSAGE:
6-7 mg. per lb. of body weight per day.

*Reg. U.S. Pat. Off.

Lederle

LEDERLE LABORATORIES DIVISION
AMERICAN CYANAMID COMPANY
PEARL RIVER, NEW YORK

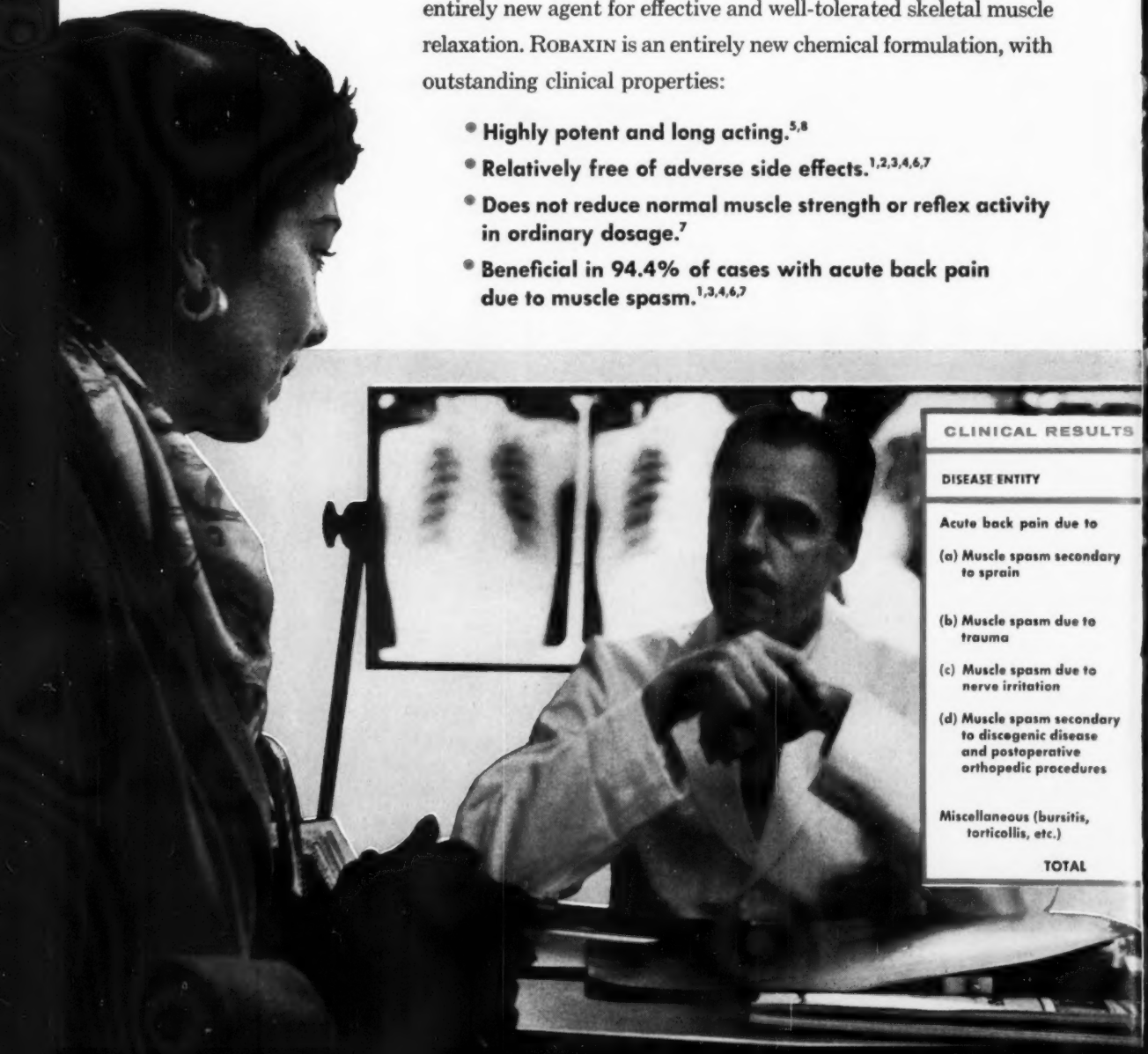
Significant **Robins** research discovery:

A NEW SKELETAL MUSCLE RELAXANT

Ro

ROBAXIN – synthesized in the Robins Research Laboratories, and intensively studied for five years – introduces to the physician an entirely new agent for effective and well-tolerated skeletal muscle relaxation. ROBAXIN is an entirely new chemical formulation, with outstanding clinical properties:

- **Highly potent and long acting.**[5,8]
- **Relatively free of adverse side effects.**[1,2,3,4,6,7]
- **Does not reduce normal muscle strength or reflex activity in ordinary dosage.**[7]
- **Beneficial in 94.4% of cases with acute back pain due to muscle spasm.**[1,3,4,6,7]



CLINICAL RESULTS	
DISEASE ENTITY	
Acute back pain due to	
(a) Muscle spasm secondary to sprain	
(b) Muscle spasm due to trauma	
(c) Muscle spasm due to nerve irritation	
(d) Muscle spasm secondary to discogenic disease and postoperative orthopedic procedures	
Miscellaneous (bursitis, torticollis, etc.)	
TOTAL	



baxin®

(Methocarbamol Robins, U.S. Pat. No. 2770649)

Highly specific action

ROBAXIN is highly specific in its action on the internuncial neurons of the spinal cord – with inherently sustained repression of multisynaptic reflexes, but with no demonstrable effect on monosynaptic reflexes. It thus is useful in the control of skeletal muscle spasm, tremor and other manifestations of hyperactivity, as well as the pain incident to spasm, without impairing strength or normal neuromuscular function.

Beneficial in 94.4% of cases tested

When tested in 72 patients with acute back pain involving muscle spasm, ROBAXIN induced marked relief in 59, moderate relief in 6, and slight relief in 3 – or an over-all beneficial effect in 94.4%.[1,3,4,6,7] No side effects occurred in 64 of the patients, and only slight side effects in 8. In studies of 129 patients, moderate or negligible side effects occurred in only 6.2%.[1,2,3,4,6,7]

WITH ROBAXIN IN ACUTE BACK PAIN[1,3,4,6,7]

NO. OF CASES	DURATION OF TREATMENT	DOSE PER DAY (divided)	RESPONSE marked	mod.	slight	neg.	SIDE EFFECTS
18	2-42 days	3-6 Gm.	17	1	0	0	None, 16 Dizziness, 1 Slight nausea, 1
13	1-42 days	2-6 Gm.	8	1	3	1	None, 12 Nervousness, 1
5	4-240 days	2.25-6 Gm.	4	1	0	0	None, 5
30	2-28 days	1.5-9 Gm.	24	3	0	3	None, 25 Dizziness, 1 Lightheadedness, 2 Nausea, 2 *
6	3-60 days	4-8 Gm.	6	0	0	0	None, 6
72			59	6	3	4	*Relieved on reduction of dose

References: 1. Carpenter, E. B.: Publication pending. 2. Carter, C. H.: Personal communication. 3. Forsyth, H. F.: Publication pending. 4. Freund, J.: Personal communication. 5. Morgan, A. M., Truitt, E. B., Jr., and Little, J. M.: American Pharm. Assn. 46:374, 1957. 6. Nachman, H. M.: Personal communication. 7. O'Doherty, D.: Publication pending. 8. Truitt, E. B., Jr., and Little, J. M.: J. Pharm. & Exper. Therap. 119:161, 1957.

Indications – Acute back pain associated with: (a) muscle spasm secondary to sprain; (b) muscle spasm due to trauma; (c) muscle spasm due to nerve irritation; (d) muscle spasm secondary to discogenic disease and postoperative orthopedic procedures; and miscellaneous conditions, such as bursitis, fibrositis, torticollis, etc.

Dosage – Adults: Two tablets 4 times daily to 3 tablets every 4 hours. Total daily dosage: 4 to 9 Gm. in divided doses.

Precautions – There are no specific contraindications to Robaxin and untoward reactions are not to be anticipated. Minor side effects such as lightheadedness, dizziness, nausea may occur rarely in patients with unusual sensitivity to drugs, but disappear on reduction of dosage. When therapy is prolonged routine white blood cell counts should be made since some decrease was noted in 3 patients out of a group of 72 who had received the drug for periods of 30 days or longer.

Supply – Robaxin Tablets, 0.5 Gm., in bottles of 50.

A. H. ROBINS CO., INC., Richmond 20, Va.

Ethical Pharmaceuticals of Merit since 1878

WHEN YOU TREAT INFECTIONS IN PATIENTS SUCH AS THESE

- debilitated
- elderly
- diabetics
- infants, especially prematures
- those on corticoids
- those who developed moniliasis on previous broad-spectrum therapy
- those on prolonged and/or high antibiotic dosage
- women—especially if pregnant or diabetic

the best broad-spectrum antibiotic to use is

MYSTECLIN-V

Squibb Tetracycline Phosphate Complex (Sumycin) and Nystatin (Mycostatin) — Sumycin plus Mycostatin

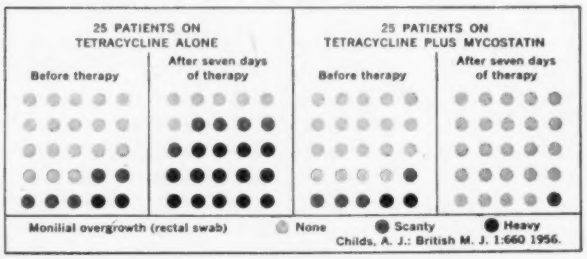
for practical purposes, Mysteclin-V is sodium-free

for "built-in" safety, Mysteclin-V combines:

1. Tetracycline phosphate complex (Sumycin) for superior initial tetracycline blood levels, assuring fast transport of adequate tetracycline to the infection site.

2. Mycostatin—the first safe antifungal antibiotic—for its specific antimonilial activity. Mycostatin protects many patients (see above) who are particularly prone to monilial complications when on broad-spectrum therapy.

MYSTECLIN-V PREVENTS MONILIAL OVERGROWTH



Childs, A. J.: British M. J. 1:660 1956.

Capsules (250 mg./250,000 u.), bottles of 16 and 100. *Half-Strength Capsules* (125 mg./125,000 u.), bottles of 16 and 100. *Suspension* (125 mg./125,000 u.), 2 oz. bottles. *Pediatric Drops* (100 mg./100,000 u.), 10 cc. dropper bottles.

SQUIBB

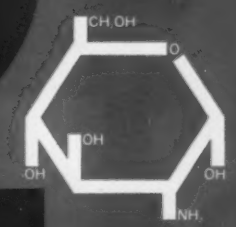
Squibb Quality—the Priceless Ingredient

"MYSTECLIN," "MYCOSTATIN" AND "SUMYCIN" ARE SQUIBB TRADEMARKS

Three advantages of glucosamine-potentiated tetracycline:

1 ***Highest, fastest tetracycline blood levels,*** with glucosamine enhancement. A screening program involving 84 possible adjuvants, multiple four-way crossover tests, 30,000 blood level determinations and more than 100,000 assays proved glucosamine to be the enhancing agent of choice.

2 ***Greatest consistency of higher tetracycline blood levels*** Not only does glucosamine considerably increase antibiotic blood levels faster, but it produces these higher blood levels more consistently as shown by extensive crossover tests.



3 ***Achieved with the physiologic advantages of glucosamine,*** a normal human metabolite. Glucosamine, found widely in the body, is nontoxic and does not irritate the gastrointestinal tract; there is evidence that glucosamine may favorably influence the bacterial flora of the intestine. Further, it is sodium free and releases only four calories of energy per gram.

in new well-tolerated

The most widely prescribed broad-spectrum antibiotic now potentiated with glucosamine, the enhancing agent of choice

COSA-TETRACYN

GLUCOSAMINE-POTENTIATED TETRACYCLINE

Capsules, 250 mg., 125 mg.
Half strength (125 mg. capsules) for long-term indications or pediatric use.

Pfizer Pfizer Laboratories, Division, Chas. Pfizer & Co., Inc., Brooklyn 6, N.Y.

"Trademark

RELIEF

1



2



FROM INFECTION*

FROM IRRITATION

*as adjunctive therapy only

THE FIRST TROCHE TO PROVIDE THREEFOLD BENEFITS

'PENTAZETS'

TROCHES

NON-NARCOTIC ANTITUSSIVE EFFICACY SHOWN TO APPROXIMATE THAT OF CODEINE



AND **NOW** COUGH CONTROL TOO

With the addition of a non-narcotic antitussive to troche medication, 'PENTAZETS' provides a new and extended therapeutic advantage in this convenient form of treatment.

Treatment of the cough too, so often a troublesome symptom of sore throat, combined with wide-range antibiotic activity and soothing analgesic benefit, now offers *three*fold relief in a variety of throat irritations.

And 'PENTAZETS' are pleasant-tasting, too, making them highly acceptable, especially to children.

'PENTAZETS' contains:

• *Homarylamine*—a new non-narcotic antitussive with cough control shown to approximate that of codeine. • *Bacitracin-Tyrothricin-Neomycin*—a combined antibiotic treatment against many pathogenic organisms with little danger of unfavorable side effects. • *Benzocaine*—a local anesthetic for soothing relief to inflamed tissues. Being slowly absorbed, it is especially beneficial for prolonged effect and benefit to surrounding areas.

Supplied: Vials of 12.

Each 'PENTAZETS' troche contains:

Homarylamine hydrochloride	20 mg.
Zinc Bacitracin	50 units
Tyrothricin	1 mg.
Neomycin sulfate	5 mg.
(equivalent to 3.5 mg. neomycin base)	
Benzocaine	5 mg.



MSD

MERCK SHARP & DOHME

DIVISION OF MERCK & CO., Inc., PHILADELPHIA 1, PA.

PENTAZETS is a trademark of Merck & Co., Inc.

new INCR with



CORRECTS IRON DEFICIENCY AS IT STIMULATES APPETITE

- Offers appetite stimulating Vitamins B_1, B_6, B_{12} and protein-upgrading l-Lysine, fortified with a readily absorbed, well-tolerated form of iron.
- Delicious cherry base designed to appeal to all patients.

PARTICULARLY FOR CHILDREN

Helps young appetites keep pace with the increased nutritional demands of childhood while supplying adequate amounts of essential iron.

EMIN* IRON

LYSINE-VITAMINS

SYRUP



Provides the following percentages of Minimum Daily Requirements per teaspoonful:

	Child under 6	Child over 6	Adult
B_1	2000%	1333%	1000%
Iron	400%	300%	300%

FORMULA

EACH TEASPOONFUL (5 cc.) CONTAINS

l-Lysine HCl	300 mg.
Ferric Pyrophosphate (Soluble)	250 mg.
Iron (as Ferric Pyrophosphate)	30 mg.
Vitamin B_{12} Crystalline	25 mcgm.
Thiamine Mononitrate (B_1)	10 mg.
Pyridoxine HCl (B_6)	5 mg.
Alcohol	0.75%

Average dosage is one teaspoonful daily. Available in bottles of 4 fl. oz.

*REG. U. S. PAT. OFF.

LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK

Lederle



Hospital practice of infant feeding

Standard formulas for PREMATURES

Breast milk is satisfactory for the feeding of prematures in spite of the low protein and mineral and high fat content. But eventual formula feeding should provide a high protein and carbohydrate to satisfy the rapid-growing needs of the premature and low fat content because of limited digestive capacity.

Feedings of small prematures are most effectively administered by the indwelling polythene nasal catheter and of large prematures, by bottle with small nipples.

The first six feedings should be a sterile 5% solution of Karo Syrup at 2 to 3 hour intervals; for subsequent feedings, breast milk or formula should be added in gradually increasing amounts according to tolerance and requirements, as indicated in the table below.

Initial feeding schedules for premature infants

(Feedings Started After 36 Hours and Continued at 2 to 3 Hour Intervals)

FEEDINGS	COMPOSITION	QUANTITY
First Six	5% Karo	2-5 ml.
7th and 8th	2 parts 5% Karo 1 part breast milk or formula	6-10 ml.
9th and 10th	1 part 5% Karo 1 part breast milk or formula	8-15 ml.
11th and 12th	1 part 5% Karo 2 parts breast milk or formula	10-18 ml.
Subsequently	Breast or formula feeding	12-20 ml.

ADVANTAGES OF KARO® IN INFANT FEEDING



Composition: Karo is a superior maltose-dextrin mixture because the dextrins are non-fermentable and the maltose is rapidly transformed into dextrose which requires no further digestion.

Concentration: Volume for volume Karo furnishes twice as many calories as similar milk modifiers in powdered form.

Purity: Karo is processed at sterilizing temperatures, sealed for complete hygienic protection and devoid of pathogenic organisms.

Low Cost: Karo costs 1/5th as much as expensive milk modifiers and is available at all food stores.

Medical Division
CORN PRODUCTS REFINING COMPANY
17 Battery Place, New York 4, N.Y.

Say you saw it in the Journal of the Michigan State Medical Society

there is one tranquilizer clearly indicated in peptic ulcer...



•Tests in a series of 25 patients show that there is "a definite and distinct lowering [of both volume of secretions and of free hydrochloric acid] in the majority of patients. . . . No patients had shown any increase in gastric secretions following administration of the drug."[1]

Now you have 4 advantages when you calm ulcer patients with ATARAX:

1. ATARAX suppresses gastric secretions; others commonly increase acidity.
2. ATARAX is "the safest of the mild tranquilizers."[2] (No parkinsonian effect or blood dyscrasias ever reported.)
3. It is effective in 9 of every 10 tense and anxious patients.
4. Five dosage forms give you maximum flexibility.

supplied: 10, 25 and 100 mg. tablets, bottles of 100. Syrup, pint bottles. Parenteral Solution, 10 cc. multiple-dose vials.

references: 1. Strub, I. H.: Personal communication. 2. Ayd, F. J., Jr.: presented at Ohio Assembly of General Practice, 7th Annual Scientific Assembly, Columbus, September 18-19, 1957.

Rx Roerig

New York 17, New York
Division, Chas. Pfizer & Co., Inc.

A NEW, CORTICOSTEROID MOLECULE WITH GREATER ANTIALLERGIC, ANTIRHEUMATIC AND ANTI-INFLAMMATORY ACTIVITY



for your patients with

- BRONCHIAL ASTHMA, ALLERGIC DISORDERS
- ARTHRITIC DISORDERS
- DERMATOSES

Squibb Triamcinolone

KENACORT

- far less gastrointestinal distress
- safe to use in asthma with associated cardiac disease; no sodium and water retention
- does not produce secondary hypertension—low salt diet not necessary
- no unnatural psychic stimulation
- often works when other glucocorticoids have failed
- and on a lower daily dosage range

SQUIBB

Initial dosage: 8 to 20 mg. daily. After 2 to 7 days gradually reduce to maintenance levels.
See package insert for specific dosages and precautions.
1 mg. tablets, bottles of 50 and 500.
4 mg. tablets, bottles of 30 and 100.

CENTENNIAL 1858 1958 SQUIBB

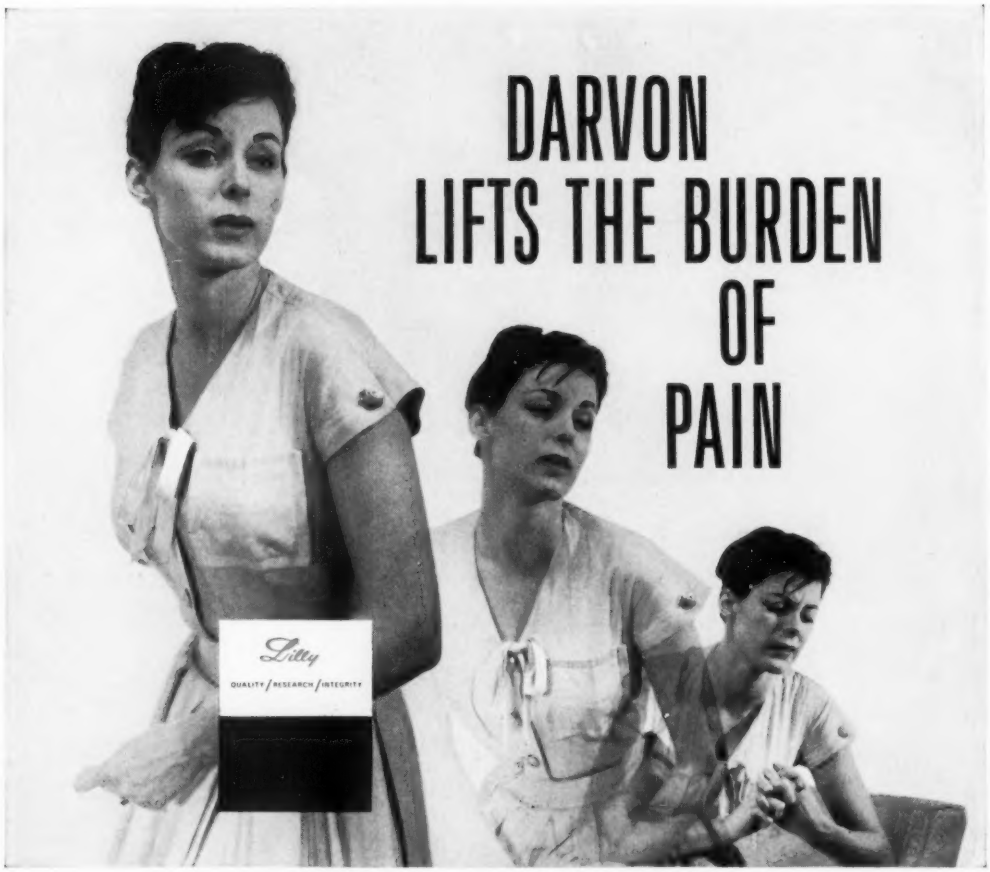
Squibb Quality—the Priceless Ingredient

"KENACORT" IS A SQUIBB TRADEMARK



SCHERING CORPORATION • BLOOMFIELD, NEW JERSEY Schering

M-J-126



The non-narcotic analgesic with the potency of codeine

DARVON (Dextro Propoxyphene Hydrochloride, Lilly) is equally as potent as codeine yet is much better tolerated. Side-effects, such as nausea or constipation, are minimal. You will find 'Darvon' helpful in any condition associated with pain. The usual adult dose is 32 mg. every four hours or 65 mg. every six hours as needed. Available in 32 and 65-mg. pulvules.

DARVON COMPOUND (Dextro Propoxyphene and Acetylsalicylic Acid Compound, Lilly) combines the antipyretic and anti-inflammatory benefits of 'A.S.A. Compound'* with the analgesic properties of 'Darvon.' Thus, it is useful in relieving pain associated with recurrent or chronic disease, such as neuralgia, neuritis, or arthritis, as well as acute pain of traumatic origin. The usual adult dose is 1 or 2 pulvules every six hours as needed.

Each Pulvule 'Darvon Compound' provides:

'Darvon'	*32 mg.*
Acetophenetidin	*162 mg.*
'A.S.A.' (Acetylsalicylic Acid, Lilly)	*227 mg.*
Caffeine	*32.4 mg.*

*'A.S.A. Compound' (Acetylsalicylic Acid and Acetophenetidin Compound, Lilly)

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U. S. A.

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Say you saw it in the Journal of the Michigan State Medical Society

The JOURNAL

of the Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

VOLUME 57 MARCH, 1958 NUMBER 3

A Reasonable Attitude toward the Medical Use of Diagnostic Radiation

By William R. Eyler, M.D., and
Wendell M. Burns, M.D.
Detroit, Michigan

FROM the beginning of life, man and his phylogenetic predecessors have been immersed in a sea of radiation. Indeed, it seems likely that the natural radioactivity at the level of the earth's crust has been steadily decreasing since the formation of the earth. Present concern with the effect of radiation upon humanity thus is a consideration not of a new agent, but rather of what effect a quantitative difference may cause.

The study of this field is divided necessarily into the problem of the effects of radiation on the individual and that of the genetic effects on the future of the race. The genetic aspect will be considered first.

In order to form an idea of the magnitude of this change in incident radiation and to compare it to what mankind has been receiving previously, the components of "natural" radiation will be examined. The highest energy radiation incident upon mankind is that of cosmic rays. This radiation is very penetrating; it delivers approximately 0.028 rad* per year.[3] If one lives at an altitude of 10,000 feet, this will be increased by a factor of three (1 rad = 1000 m rad).

Gamma radiation from local surroundings is responsible for the greater fraction of the external radiation dose. This radiation is of high energy, but lower than cosmic rays. The dose varies with the location depending on the amount of naturally radioactive materials present. It is higher in certain types of brick and concrete houses and highest in buildings made of granite.[10] In general this totals about 0.043 rad per year and is seldom higher than 0.3 rad per year.[12] The activity due to radon in the air contributes approximately 0.001 rad per year.[8]

Radiation from the atoms of our own tissues arises from Potassium 40, Carbon 14 and the radon series. Potassium 40 delivers a dose calculated at approximately 0.02 rad per year, Carbon 14 contributes about 0.001 rad per year, and radon and its disintegration products in the tissues contribute 0.002 rad per year.[8] Thus for an Englishman living in Leeds and probably for an American living in Detroit, the total dose per year is about 0.095 rad and the total dose to age thirty to either gonads or other tissues totals approximately 2.85 rads.[8] Since the only radiation of genetic importance is that received prior to parenthood, and the average age at parenthood is thirty years, the significant figure is the thirty-year gonadal dose; this figure is very conveniently close to one hundred millirads per year. This information is summarized in Table I.[8]

Our current civilization imposes additional radiation upon the bone marrow and genes of man-

Dr. Eyler is Radiologist-in-Chief and Dr. Burns is a Resident in Radiology, Henry Ford Hospital, Detroit, Michigan.

*The rad is a unit of absorbed dose and thus a more biologically significant unit than the "r" or incident dose. Whenever possible, rads will be used as the unit, but where no such data are available, the "r" will be used.

TABLE I. DOSE-RATES TO THE GONADS FOR A REGION OF 'NORMAL' GROUND RADIOACTIVITY

Radiation Source	Dose to Gonads Per Year (rad)
External Irradiation	
Cosmic rays (sea level)	0.028
Local gamma rays (Leeds, 78 millirad/year indoors	
48 millirad/year out-of-doors	0.043
Radon in air, 3×10^{-13} c/l	0.001
nternal Irradiation	
Potassium 40	0.020
Carbon 14	0.001
Radon + disintegration products, 3×10^{-13}c/l	0.002
Total dose per year	0.095†
Dose to age 30 years	2.85†

†Includes allowance for the R. B. E. of the alpha radiation where present, and therefore also expresses the gonad-dose in rem.
Reproduced from the Report of the Medical Research Council of England[6].

kind. The largest source of radiation is, without doubt, the medical use of diagnostic roentgen examinations. The minimum estimates for the population dose of this radiation per year range from a low of 22 mr* arrived at in the area of Leeds,[8] to estimates of 100 mr made for this country.[9] Radiotherapy has, in general, been given to those beyond the reproductive age so that gonadal doses are not important. Fluoroscopic shoe fitting has probably contributed 0.1 mr, luminous watches and clocks 1 mr, television sets, as presently used, considerably less than 1 mr and high altitude flying has not increased significantly the population dose. Occupational exposure in radiology and industry has contributed at least 1.6 mr, the atomic energy personnel exposure at least 0.1 mr and fall-out from test explosions less than 1 mr per year in the United Kingdom (Table II).[8] If weapons-testing is continued at the rate of the last five years, the estimated yearly gonadal dose in this country is 3 mr, but if it were to proceed at the higher levels of 1953 and 1955, this dose would be multiplied by two.[9] The total is thus slightly above the natural background.

The mechansim by which superior individuals are produced is the same as that which leads to individual hereditary defect, namely that of genetic mutation. If the exact fraction of the load of mutant genes carried by the population which is the result of radiation were known, the quantity of radiation required to produce any given percentage change in the number of mutant genes in the population could be calculated. Although the figure is not known exactly, there is good evidence that something between 2 and 20 per cent of the mutants are the result of previous radiation received by past generations.[8]

*1 r = 1000 mr

The application of radiation results in the acceleration of the evolutionary process and since many more unfavorable mutations are produced than favorable ones, an increase of the process of natural selection results. The best estimate which can be made at this time of the dose of radiation, which if administered continuously to the entire population for 100 generations would cause a doubling of the amount of clinically apparent mutation, is 50 rads gonadal dose by age thirty.[2,8,9] If this dose is administered to the entire population for one generation, however, the apparent clinical increase in mutations is barely detectable, being of the order of 2 to 3 per cent.[8,9] Genetic defects which may be apparent in the population include mental and physical defects of all categories. Roughly, 4 to 5 per cent of all viable babies born in the United States have defects. Of all of these, it is estimated that half or about 2 per cent of the total live births have defects of simple genetic origin.[9] If the total population were then subjected to a doubling dose of radiation, continuously for the next 100 generations, this 2 per cent of such genetic defects would gradually rise and eventually be doubled.

The British report[6] states that "four per cent of all babies die stillborn or die shortly after birth while another two per cent survive but are malformed; and in addition, a considerable number in later years develop diseases or abnormalities in which hereditary constitution is a predominant cause." Doubling mutation rates of both parents would add an additional 0.2 per cent to the present 7 to 8 per cent chance of producing a defective child, or add 0.2 per cent to the 2 or more per cent of anticipated hereditary defects. According to their specific hereditary transmission

TABLE II. SUMMARY OF ESTIMATED POPULATION DOSES OF RADIATION TO GONADS

Source of Radiation	Approximate Dose to Gonads as a Percentage of Natural Background
Natural background	100
Diagnostic radiology	at least 22
Radiotherapy	?
Shoe-fitting	0.1
Luminous watches and clocks	1
Television sets	much less than 1
High altitude flying	insignificant
Occupational exposure:	
Radiology and Industry	at least 1.6
Atomic Energy Authority	0.1
Fall-out from test explosions	less than 1

Reproduced from the Report of the Medical Research Council of England[8].

pattern (dominant, recessive, or sex linked), the various hereditary abnormalities can be classified as to their appearance in the first generation.

Although 50 rads is considered a tolerable dose for a very small fraction of the population, 10 rads is suggested as the top limit for the whole population.[8,9] The current dose is 4 rads. At present dose levels, about 0.01 per cent of the new generation or 1/10,000 bear some defect due to "civilization" radiation compared to 800/10,000 who are stillborn or malformed due to other causes.[8] The wide dispersion of latent mutations makes the average dose received by the whole population the important figure; if many members receive no radiation beyond the natural background, the tolerance of those who do receive radiation is correspondingly greater. For example, your grandson will not inquire of his prospective bride whether or not her grandmother had roentgen pelvimetry.

The second aspect is the effect of radiation on the individual. Experimental work with animals is of importance, but there are many lines of information about the actual effects of radiation on man. Accidental exposures and exposures during time of war indicate that when a population is subjected to a dose of between 400 and 600 roentgens total body radiation, half will succumb. These effects are mediated largely by damage to the blood-forming tissues and to the intestinal tract. It is known that very young and very old individuals have an increased sensitivity to lethal effects of radiation. The effects on the blood-forming organs and the gastrointestinal tract are generally direct effects, but there are also indirect effects of radiation. For example, protection of the spleen during total body radiation will considerably reduce the effect of the dose;[1] thus, if one is about to be subjected to a sudden large amount of radiation, it is suggested that he make an effort to protect his spleen.

At the other end of the time scale is the chronic small dose exposure received by those whose occupations bring them into contact with radium and x-ray. Without doubt, many of the early radiologists must have received as much as 1000 roentgens. There is an increased mortality among radiologists due to leukemia, which indicates an examination of the relationship of leukemia to radiation. The best study of this relationship is that of E. B. Lewis,[5] who has correlated data from four groups of individuals about the relationship of radiation and leukemia. These groups are: first, survivors of the atomic bomb radiations in Japan; second, patients radiated for ankylosing spondylitis; third, children radiated as infants for thymic enlargement; and fourth, radiologists.

The reported death rate from leukemia has increased since 1900, and particularly since 1930, with a crude mortality rate for leukemia of 68 per million per year in 1954 compared to 42 per million per year in 1940.[5] Improvement in diagnosis doubtless explains part of this, but other factors may be responsible such as the increased exposure of the population to radiation. The incidence of leukemia among the survivors of Hiroshima and Nagasaki has been plotted in comparison with the distance of the individuals from the hypocenter and thus, the dose which they received.[5] This is corrected by subtracting the incidence occurring in residents who were outside the zone of significant radiation. This analysis shows an increased incidence of leukemia as the hypocenter is approached until in the zone from 0 to 1,000 meters, the incidence is nearly 1 per cent for this seven and three-quarter year follow-up period. When the incidence for each zone is divided by the estimated dose and allowance made for shielding, a relatively constant value for probability of acquiring leukemia of 2×10^{-6} per individual per rad per year is obtained. Thus, if an individual receives a total body dose of 100

rads, his chance of dying of leukemia is 200 out of 1,000,000.

Court Brown and Doll[8] have studied the incidence of leukemia among patients treated with x-rays for ankylosing spondylitis. Of 11,287 patients radiated during the period of 1935 to 1954, thirty-seven developed leukemia. In this situation as well, the dose of radiation delivered to the red marrow increased the incidence of leukemia in proportional fashion, and considering the dose of radiation delivered to the entire red marrow system, a remarkably similar range of probability of 0.6×10^{-6} to 2×10^{-6} per individual per rad per year is obtained.[5]

Simpson, Hemplemann and Fuller[11] traced 1400 individual infants who had been given radiation for enlarged thymus and a control group of nearly 1800 unirradiated siblings. In the irradiated group there were seven confirmed cases of leukemia with none in controls. The number of cases expected in this treated population is 0.6. This study needs a comparable group of children with enlarged thymus who have not been treated with radiation, but at the same time, the probability of leukemia in the thymic enlargement group falls in the same general range as those of the other categories; the probability of acquiring leukemia has the value of 0.4×10^{-6} to 6×10^{-6} per rad to the lymphatic system per individual per year.[5]

Though others had preceded him with case reports, March[6] called attention to the increased incidence of leukemia in radiologists in 1944. At the time of his second report in 1950,[7] he had collected a total of fourteen deaths from leukemia in radiologists. Subjecting this information to the same type of analysis applied to the other bodies of data, Lewis arrives at a leukemia probability value of 0.7×10^{-6} to 7×10^{-6} per individual per rad per year.

When one turns, however, to the evidence for shortening of radiologists' lives, Warren's figure of five and two-tenths years[9,15] is subject to considerable interpretation on the basis of age distribution.[5]* Detailed analysis suggests that the total death rate from all causes for radiologists lies between the higher death rate for all physicians and the lower rate for all medical specialists.

A preliminary report by Stewart[14] and others suggests that the fetus *in utero* is particularly susceptible to radiation.

*See additional bibliography at end of article.

Discussion

The recent consideration of the hazards of radiation has served again to alert the medical profession, and radiologists in particular, to the need for improving techniques and limiting patient exposure to a minimum. There is no question that, at the present time, the yield of otherwise unobtainable information concerning life-shortening disease and correctable life-shortening disease, far exceeds the chance of a patient succumbing from leukemia. The considerable lay publicity has almost always overlooked the great benefit derived from diagnostic radiation. Survey studies of asymptomatic individuals over fifty years of age show 0.2 per cent incidence of cancer alone.[13]

Technical advances such as increased film speed, image amplification, higher voltages and increased filtration all have reduced the amount of radiation received by patients during diagnostic studies.

Summary

1. The production of mutations by radiation absorbed by the gonads prior to parenthood is a linear function of the quantity of radiation without any evidence of a threshold effect and for this reason, all unnecessary pre-parenthood gonadal radiation is contra-indicated.

2. The incidence of clinically apparent mutations induced at the present rate of uilization of diagnostic medical x-rays and present quantity of fall-out from nuclear explosions is predictable with fair certainly as approximately 1/10,000 new births compared to 800/10,000 stillborn or malformed due to other causes. This does not appear excessive in view of the benefits derived from diagnostic radiation, but such radiation should be reduced by all possible means.

3. Those procedures which produce a particularly high dose to the patient, such as pelvimetry, should be carefully re-evaluated both for possible improvements in technique and as to indications for their use.

4. The probability of an individual developing leukemia, in addition to the spontaneous incidence, appears to be a direct function of the amount of radiation absorbed by him, again without a threshold level, but with a linear relationship between radiation absorbed by the red bone marrow and frequency of leukemia.

5. The yield from diagnostic roentgen studies

(Continued on Page 369)

The Role of the Physician in the Care of the Mentally Retarded

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IT IS LOGICAL for a physician to play his greatest part in the early detection of mental deficiency in very young children or infants. It would be ideal if always he were the first to detect this problem and initiate some evaluation in very early infancy and long before the child reaches school age. It is also logical that the first approach for assistance should be made by parents to the physician when they first worry about the mental capacity of a small child. The physician should be the first to aid in the evaluation of the baby's mental level, and most importantly, to see if there is a physical explanation for the mental defect. It is clear, on the one hand, that mental defects result from many different diseases which may damage the brain before or after the child is born, and, on the other hand, the evaluation of a mental handicap is made much more difficult by the presence of disease even if the disease in itself does not cause this mental handicap. A great many illnesses bring about apparent mental retardation which is not an evidence of actual incapacity to learn, but is only an evidence of a handicap in learning. This is a tremendously complex field which I cannot even summarize in a few pages.

It is clear that accidents varying all the way from an automobile collision to birth injuries may cause damage to the brain after the baby is born. Also, the accidents of infection, such as inflammation of the brain in meningitis or encephalitis (usually due to virus infections) may cause either temporary or irreparable brain damage—sometimes immediately obvious but at other times not evident for many months.

It is less well understood that babies can be born with defective brains due to intrauterine disease, extremely difficult to detect, and occurring long before the baby is born. Congenital abnormalities of the brain or body (those with which a baby is born) are commonly, but often inaccurately, blamed on heredity—on faulty development of the fetus in its very early life due to defects in chromosomes and genes rather than on intrauterine disease. We have been too much inclined to blame all defects present at birth on family traits, often with great distress to parents because of the fear for the well-being of their future children.

One of the commonest causes of brain defect which leads to mental deficiency and often to many other problems such as that called cerebral palsy, is a premature birth. An infant, small at birth, certainly presents a greater risk of trouble. There are two general causes for a tiny birth weight. Some are born small because of intrauterine disease, which we rarely can detect, and some are small for the commonly accepted reason that they are not carried to term. In each case certain risks occur. Frequently it may be months or even a year or two after birth before we find some of the more subtle evidences of brain inadequacy consequent to premature birth due to intrauterine disease which has resulted in the immaturity of the infant at birth.

The duty of the physician to make a diagnosis of mental deficiency as early as possible and to transmit this information to the parents is a clear one, and yet it is one which unfortunately is sometimes avoided by the physician for reasons which may at first seem hard to understand. We certainly all believe that it is highly desirable to present the facts, even unpleasant ones, as early as possible to the parents so that a constructive course in the management of the child can be planned and followed. Even though there is little to do from a strict educational point of view for a mentally retarded child of one year of age, I think most will agree that it is immensely important that the parents become immediately aware of their problem so that they will develop the courage to face it early, and not have it

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brought to their attention, perhaps suddenly and in a tragic and dramatic way, when they attempt to put the child in school.

There is an understandable temptation for the physician to avoid this unpleasant duty. When a frank and honest analysis of mental retardation is made in infancy and presented to the parents, who see only a cute and appealing baby, the response is apt to be one of resistance and denial of his opinion which is, of course, distressing to the physician. It is also extremely important that the physician be entirely correct. He cannot, in most cases, wisely transmit only his suspicion of trouble to the parents. It seems to me that there is less inclination to forgive a physician when he gives a wrong bad prognosis than when he gives a wrong good one. Optimism that is wrong is more pleasant than pessimism that is wrong. The physician must be correct and certain in his prognosis of mental deficiency, and it is evident that the younger the child the harder it is to be sure, and the more likely it is that some physical situation which is abnormal (but not of major importance) may cause apparent retardation. Since he knows nothing can be done about the problem at the time there is a tendency, which I deprecate (but with which I sympathize) for the physician to procastinate, and to avoid a discussion of the problem as long as the physical health of the child remains good. It is, of course, our duty to teach our medical students and graduate students to face this problem courageously and energetically as soon as they have a suspicion, but, as I have said, the physician must be sure of his grounds, and even the request for medical consultation can be embarrassing if his suspicion is not supported.

The importance of intrauterine disease as a cause of congenital abnormalities has just begun to be understood, and it appears that more detailed studies of the health of pregnant women are going to elicit some very fruitful fields for research. Here, techniques of prevention may ultimately enable us to save our children from many conditions which previously have been blamed on heredity defects.

We are beginning to recognize congenital, that is "born with," abnormalities, that are more subtle than the gross anatomical defects such as harelips, cleft palates, or abnormalities of the heart. It is harder to appreciate and evaluate the far more subtle, but just as real, abnormalities that are the result of enzyme disturbances in the body, or the malfunction of certain glands. Errors in body chemistry or, as it has been called, inborn errors of metabolism, can cause mental deficiency. There are now at least three congenital abnormalities of physiological function which we know may lead to mental retardation and which are preventable—or at least, in part, correctible, even though the basic condition is not yet curable. I might mention them briefly although I believe you are familiar with them.

One is abnormality of the thyroid gland, the oldest one in point of understanding. Absence of adequate thyroid activity leads to cretinism with which mental defect is almost always associated. Here, early diagnosis is absolutely essential, and prevention of brain damage can take place to a very great extent by the use of substitution therapy, that is, the use of thyroid. I hardly need to talk about this common problem. It is the first endocrine gland defect that we have understood and there is much too great an inclination to blame it for many cases of retardation and to use thyroid therapy with ultimate and bitter disappointment. However, there is no question but sometimes this fault does exist and can be corrected by proper treatment. It is important to emphasize again how it is over-diagnosed and that many children are given thyroid unnecessarily.

Another inborn error of metabolism is called galactosemia. Here, there is a defect in the handling of certain carbohydrates (sugars) by the liver, so that an abnormal level of galactose is always circulating in the blood, producing various defects, among them mental defect, or brain damage. Here is a condition easy to diagnose by a simple test of the urine, and which appears quite easy to correct by diet control although the correction must be continued indefinitely.

A most promising forward step was the identification of the disease, phenylpyruvic oligophrenia, as a cause of severe brain damage. In this condition, there seems to be a fault in the liver due to the lack of certain enzymes, or the overproduction of others, in handling of certain normal foods, basically protein, which results in the circulation of a substance which causes brain damage. It occurs classically on a hereditary basis in certain little blond children, and the detection of the condition (at least in a gross screening test) is very simple—a urine test which can be carried out in five minutes. It is appar-

ent that a very small percentage of all retarded children suffer from this condition, and it seems probable, at present, that if it could be diagnosed early it could be prevented. The condition itself cannot now be cured since it is an inborn hereditary one, but the ill effects of it apparently can be prevented, if detected early, by a very strict and (at present) expensive diet. The detection is by a simple urinalysis but would have to perform it on some 10,000 healthy infants to find one early case. The burden would be far less were we to test only those childrn who show some symptoms, but that would not constitute prevention since already some damage would be done. Attempts at such routine examinations are now under way and undoubtedly will be carried out more frequently, but you can see the difficulty of even simple tests in little babies when urine is necessary for the test and when the test cannot be carried out successfully in the very early newborn period. The real importance in the discovery of this disease is the possibility that other similar defects may be better understood and hence, prevented.

One of the big problems which a physician must face is to make an early determination of mental deficiency in infants. Attempts at psychometric examination on little babies are difficult even though one might think, superficially, that it is easy, especially judging from the publications of certain enthusiasts. The evaluation of the mental level of an infant, however, depends upon his actions; what he does, not what he says or how he does arithmetic. There are many other causes besides primary brain disease which can prevent a baby from developing certain actions—from smiling, from sitting up, from standing up, from walking, and talking. Perhaps the most vivid and easily understood causes of apparent (but not real) mental deficiency are blindness and deafness, or a bad heart, or a severe lung disease. When such conditions are found in conjunction with slowness of development in the baby, it becomes a difficult problem to find out which is the cart and which is the horse, which is the leading problem and which is the secondary one. It is often true that certain brain defects, which are associated with mental deficiency, also prevent normal physical development and lead to general physical defects which might seem at first to be the cause of the mental deficiency rather than an associated or consequent condition.

The duty of the physician in regard to young children is thus to determine whether or not there is a physical cause, and to make the preliminary steps, I believe, in helping to organize the future care of this child although, as a physician, he is not trained to deal with the technical problems of the actual education and training.

If I may be so bold as to go beyond the limitations which some might impose on the physician, I should like to express my desire, also, to see great changes forthcoming in the facilities for caring for these children. Undoubtedly, permanent custodial care for some always will be necessary. No matter how good the home and how good the day school care is, some of these children cannot be happy in the relatively unprotected environment common in most homes and communities. Often these children are greatly in need to be with others like themselves. It will be wonderful when our institutions for the care of the mentally retarded are called and actually do function as "boarding schools"—perhaps permanent, perhaps not, as the case may demand. Here, the word "commitment" may become unnecessary. Here, facilities for constant training and evaluation of progress could be made readily available and simple custodial care limited only to those poor unfortunates who can respond in no way to training. Unfortunately there are plenty of those.

I should like also to see more nursery schools for very young children, not for their use only in training, but for their use early in a child's life, even in the second year, in an attempt better to determine, by observation, the capacity of the child under conditions of optimal stimulation. I will grant that there is not much point in sending a healthy normal child to a nursery school at the age of three years (perhaps even four) except to give the mother relief, but for retarded babies or babies with question of retardation, the earlier use of nursery schools can have a far greater function. Not only does it give the parents the great security that someone is constantly interested in determining the best that their child can do and stimulating him as much as possible, but it actually aids in more rapidly arriving at a prognosis in many of the borderline cases.

The Effect of Antimetabolites on Embryonic Development

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THE PURPOSE of this presentation is to outline for your consideration an area of research concerned with certain aspects of the etiology of mental retardation. We are well aware that the causes of mental retardation are multiple, running the gamut from genetic factors, adverse influences on the growing embryo, accidents associated with the birth process, to both physical and social environmental factors in the first few years of life.

Among the variables that influence embryonic development, considerable knowledge has accumulated to indicate that the nutrition of the mother is of vital importance to the health of the growing embryo. Most of this evidence comes from statistical studies, particularly as it applies to human beings. Direct research has been done on the effect of dietary deficiencies on the formation of the fetus, which of course has been done with animals, but very little attention has been given to disturbances in learning and the behavior of the offspring.[1] It would therefore be of interest to study, in major detail, the effect of various nutritional deficiencies during different periods of an animal's pregnancy upon the normal development and subsequent behavior of this animal's offspring.

As mentioned, direct research in this area is difficult and limited. In the first place, it requires several months of diet deprivation to cause a full-grown deficiency. Consequently, it is impossible to have such a deficiency begin at any specific time in the embryonic development. Secondly, if a dietary deficiency is produced, the chances of such an animal reproducing offspring is minimal.

Fortunately, there is another manner in which a dietary deficiency may be induced. This is through the use of metabolic antagonists (antimetabolites). These are substances similar in structure to a normal vitamin or hormone which can, by replacing the vitamin or hormone in the metabolic process, block a specific enzyme system and thus produce a specific deficiency in a matter, not of days but of hours. Using this technique, then, it is possible to induce specific deficiencies in animals at any time during the pregnancy. The results of these specific deficiencies may then be studied.

In addition to producing acute dietary deficiency states at any chosen time during the development of the fetus, another nutritional aspect presents itself because certain antagonists (some of these antimetabolic substances) are present in normal foods. Consequently, these too play a role in the production of mental abnormalities in offspring. In addition, certain drugs which block enzyme systems may be studied too. Such are the purposes of these investigations.

Method

The animal chosen for study was the rat, because of its easy availability, its low cost, its short gestation period (21 days), its standard genetic breeding and the well-worked-out dietary requirements for maintenance on a synthetic diet. The standard diet used contained all the essential nutritional elements in quantifiable terms.

The following antagonists were chosen for this study. The first one is oxythiamine.[2] This is an antagonist to thiamine (vitamin B_1). Thiamine acts in the body to form the co-enzyme co-carboxylase or thiamine pyrophosphate.[3] Without this enzyme, energy production is virtually impossible. Also the synthesis of acetylcholine, a substance necessary for nerve conduction, is grossly retarded. Hence, it is of extreme importance in the development of the brain.

A second antagonist chosen for study is isonicotinic hydrazide, an antagonist for the vitaman pyridoxine. Isonicotinic hydrazide is a drug commonly used in the treatment of tuberculosis. A deficiency of pyridoxine may result in mental symptoms comparable to those seen in a thiamine

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deficiency. This vitamin, pyridoxine, is very important in the metabolism of the central nervous system, since it is instrumental in the removal of ammonia which acts as a neural poison. The administration of pyridoxine antagonists to animals results in epileptiform seizures.[4] This vitamin is also important in the formation of many other substances including the neuro-hormone, serotonin.

A third antagonist selected for study was methionine sulfoxide, a substance which resulted when agene, a bleaching agent, was added to wheat flour for whitening purposes. This substance produced mental symptoms in certain animals but not in others.[5] In dogs, administration of this compound causes a disease known as canine hysteria. However, large doses have no effect on either humans or rats. This lack of effect in rats and humans may be due to the blood brain barrier. Therefore, the effect of methionine sulfoxide on unborn rats (which supposedly possess no such barrier) would be interesting. Apparently this is a glutamic acid antagonist.

A fourth compound selected for study as an antimetabolite is indole-3 acetic acid, an antagonist of a very important substance called serotonin (mentioned above). The exact function of serotonin in neural tissue is unknown although its importance in metabolism of the brain is well recognized.

Finally a fifth substance, tryptamine (which occurs in the colon through bacterial action but is not proven to be connected with disturbances of mental function in humans) was chosen because of its possible antimetabolic action on various enzyme systems of the central nervous system. This compound also may be an antagonist of serotonin.

In the animal laboratories, then, a group of rats was fed each one of the five above-named antagonists and a sixth group of animals was used as a control and were chosen immediately following their impregnation. These diets were continued for seven days through the first trimester of the rat's pregnancy. The rat mothers were all tested on the seventh day to determine whether their learning ability and behavior had been influenced in any way by the antimetabolites. No abnormalities were found in the mothers to indicate that the level of antagonist was high enough to affect the mental function of the parental rats.

Results

The fifteen pregnant animals placed on a control diet all had offspring, producing a total of 135 babies. Only one in this group of offspring was grossly abnormal. Of the twenty-two pregnant animals given oxythiamine only one delivered. The five babies born to this mother all had gross abnormalities and all were killed by their mother. The twenty-one other pregnant animals had absorbed their fetuses before birth. Absorption occurred around the eighteenth day, well after the antimetabolite had been discontinued.

Of the twenty animals given isonicotinic hydrazide only one delivered any offspring. It had seven animals, none of whom survived. The other nineteen pregnant animals had absorbed their fetuses before birth.

Two of the twenty-one animals fed indole-3 acetic acid produced thirteen offspring, of whom eleven were born dead; the remaining two offspring were grossly abnormal and died within a few hours. One of the rat mothers in this group also died in childbirth, a very unusual occurrence.

No offspring were born to the eighteen pregnant rats given tryptamine; all the fetuses were absorbed. In contrast, the animals on methionine sulfoxide had normal offspring much in the same manner as the control group.

In this first study, because of the high absorption of fetuses by the pregnant rat mothers and the gross abnormalities of the few offspring that were born, it was thought that the initial dosage of the antimetabolites was too high. The dosages that were given were 5 mg./100 gm. diet for oxythiamine, 10 mg./100 gm. diet for methionine sulfoxide, 5 mg./100 gm. diet isonicotinic hydrazide, 10 mg./100 gm. diet for indole-3 acetic acid, and 10 mg./100 gm. diet for tryptamine. Consequently, the above experiments were repeated first with the dosages reduced to one half and then to one tenth with similar results occurring. This time only five animals were used in each deficiency group (oxythiamine, isonicotinic hydrazide, indole-3 acetic acid and tryptamine). No offspring were obtained from any group. These results indicate the extreme sensitivity of the embryo to the effects of agents that interfere with neural enzyme systems during the first trimester of pregnancy. The analogy in the human would be stillbirths.

Because of the extreme degree of pathology occurring as a consequence of the antimetabolite

interfering with general embryonic development, a second set of studies was initiated using the same antagonists in the original dosage, but now being fed to the pregnant rat mothers considerably later in the pregnancy, that is, from the eleventh to the eighteenth day. This study is currently in process. The results to date are as follows: The rat litters are only about half the size of the controls for those rat mothers fed oxythiamine, isonicotinic hydrazide, indole-3 acetic acid and tryptamine. These rat babies are not grossly deformed, however. They are smaller than those born to parents on normal diets; they show no aggressiveness in their behavior; their hair is not as well distributed as in their fellow normal controls, and they are decidedly more anxious and more difficult to catch. Each batch of such offspring, as they are maturing, is being studied in maze learning and through various psychological tests to determine their ability to perform and behave.

The results are just beginning to be accumulated as these babies grow older, so we can only say tentatively, that the findings are suggestive of significant retardation. Further observations are necessary for proof. In addition to the study of their behavior, these offspring are also being studied pathologically in terms of their neural development, and biochemically in terms of the enzyme systems of the central nervous system which may be involved.

Discussion

The experiments to date, which are preliminary in nature, have given us experience in the effect of antagonists on enzyme systems important in neural development. By this technique, one may interfere with a known neural enzyme system, study its effects on the developing organism and compare the results with what may be occurring in nature by chance. One may produce an acute dietary deficiency by blocking an essential vitamin during the gestation period of the mother, or for that matter, one may block any known neural enzyme system. In this way one may simulate that which might be occurring spontaneously in nature. There are many naturally occurring antimetabolites which may be taken in excess amounts during the vagaries of appetite of the mother during her pregnancy to the harm of the growing offspring. Of the antimetabolites under study we know that there are naturally occurring substances antagonistic to the vitamin thiamine, and indole-3 acetic acid is a naturally occurring plant hormone. By this same technique we are able to study the effect of drugs which are given in treating some disease processes; in this instance, isonicotinic hydrazide used in treating tuberculosis. Moreover, by this technique we can study substances that may be produced within the organism itself and absorbed as a foreign substance such as tryptamine in the colon which is formed by bacterial action.

Of considerable importance is that the amount of any of these substances given to adult animals was so small as to cause no detectable physiological or psychological effects, whatsoever. However, the effects on the embryos, in their development, were devastating.

Continuation of this area of research, then, has for its objective the elucidation of factors which interfere with the normal development of the neural system of the embryo and result in pathological states clinically characterized as mental retardation, cerebral palsy, or convulsive disorder. We have a long way to go but the road looks open and the highway offers excitement en route.

References

1. Nelson, M. D., Wright, H. V., Asling, C. W. and Evans, H. M.: Multiple congenital abnormalities resulting from transitory deficiencies of pteroylglutamic acid during gestation in the rat. J. Nutrition, 56:349, 1955.
2. Frohman, C. E. and Day, H. G.: Effect of oxythiamine on blood pyruvate-lactate relationships and the excretion of thiamine in rats. J. Biol. Chem., 180:93, 1949.
3. Lohmann, K. and Schuster, P.: Co-carboxylase. Naturwissenschaften, 25:26, 1937.
4. Victor, M. and Adams, R. D.: Symposium on the Role of Some of the Newer Vitamins in Human Metabolism and Nutrition, p. 37. New York, N. Y.: National Vitamin Foundation, 1956.
5. Ayengar, P. and Roberts, E.: Inhibition of utilization of glutamic acid by *Lacto bacillus arabinosus*. Proc. Soc. Exper. Biol. & Med., 79: 476, 1952.

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Preventive Medicine and Industry

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TODAY almost every physician with the possible exception of a few specialists is directly or indirectly concerned with industrial health. Already there are 25,000 doctors who have some official medical tie-in with industry, part time, full time, or on call." So writes Dwight H. Murray, M.D., president of the American Medical Association, in the March 9 issue of *The Journal of the American Medical Association.* The private practitioner has a new role in medicine, that of providing medical guidance for both management and labor in the prevention of illness and the protection of health. I emphasize the private practitioner, for it is the doctor in the community who is called on increasingly by industry to direct, on a part-time basis, the health programs in the smaller and medium-sized plants. It is in plants of this size that the vast majority of the employed people of this country are at work.

A physician does not have to be an industrial medical specialist to provide medical guidance to the smaller plants on a part-time basis. In fact, there never would be enough so-called specialists to go around, and further, the practitioner is himself eminently qualified through his personal and professional contacts with his community, to take part in and to assist industry in his community and the worker to a better total health. Such aims are contained in preventive medicine, which brings to the adult and industrially employed population the medical and health knowledge of our profession. Preventive medicine has many logical outlets of active expression within the industrial work place.

Of all the tools used in industry, man himself is the most important one. That this is an old idea need only be documented by the following quotations from Hippocrates: "And the physician will manage the cure best who has foreseen what is to happen from the present state of matters." In another statement from the father of medicine, "The physician must not only be prepared to do what is right himself, but also to make the patient, the attendants, and the externals co-operate." In terms of preventive medicine in industry, he is saying that the physician not only has to consider the employe as an individual, but the surroundings in which he works, his machines, stress, and his fellow men. The physician is challenged to bring about a co-operation or better adaptation of the environment, the occupation and the physical capacities of the individual employe.

Preplacement Examinations

The preplacement examination is referred to as the keystone of an industrial health program for it is based on the principle of preventive medicine. The physician who is called on to render medical service, guidance, and advice to industry on a part-time or on-call basis can start here. The preemployment medical examination of the employe is designed to permit assignment of work compatible with the physical, mental and emotional fitness of individuals, and to help maintain their safe and healthful employment. This requires of the examining physician that he be personally acquainted with the operational methods of the shop and industry itself, the occupational environment, the physical and mental demands of the job, the nature of exposures to substances or conditions which may affect health. The physician so informed is in a better position to assist management to match the physical abilities of a prospective employe with job requirements. The exact medical form that the examination takes will vary in accordance with the specific requirements demanded of the employe and as may be modified by environmental conditions.

The Council on Industrial Health of the American Medical Association states that preplacement examinations have the express purpose of determining and recording the physical condition and assignment to a suitable job. In addition, the examining physician should acquaint the examinee with his medical findings and advice him or his

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personal physician (with the applicant's approval) of health conditions needing medical attention. Here, then, are two practical steps in the practice of preventive medicine in industry: (1) the matching of a man's physical capacities, mental and emotional fitness with specific environmental and job requirements, and (2) the referring of the employe to medical care early to combat and moderate potential or actual disability or illness.

In-Plant Working Conditions

To the employe already on the job, the practitioner can now give attention to the prevention of disease and injury through medical supervision of the work place, materials, and processes to the end that he may recommend appropriate protection of employes against conditions actually or potentially harmful. Potential health hazards may arise from materials, chemical or physical, or from environmental conditions such as illumination, temperature, vibrations or noise. It is not proposed that the physician include engineering control as part of his activities, or assume to be any one of a variety of specialists in toxicology or radiation, for instance. However, he will be stimulated to look for specific signs and symptoms once aware that a potential health problem exists. Knowing what to look for medically is a long step forward in the prevention of illness and toward the maintenance of health.

It must be emphasized that although potentially hazardous operations may be in progress, this is not in itself sufficient cause to assume that injury will occur or that evident existing disability is solely due to this cause, for example. Rather, the physician will be placed in a position to appreciate and recommend to management such medical or other controls as will enable them to keep ahead of trouble, and to arrive at appropriate medical examining techniques.

Periodic Examinations

Medical records of employes are a useful tool in the practice of preventive medicine. Such base line studies as the chest film, blood pressure reading, urinalysis, and general physical findings all afford the physician a measure from which to gauge deviations from health. Periodic examinations of employes are an important and a significant contribution to health maintenance and are receiving ever-increasing attention by the medical profession. What should be the frequency of a periodic examination? This can be arrived at from two points of view. First, is the employe exposed to processes or materials which are potentially hazardous to his health? If the answer is yes, specialized examinations on a periodic basis weekly, monthly, yearly are designed to detect early signs and to prevent potential damage to the individual. Such periodic examinations are actually a medical control measure, and a check on the various other environmental or engineering techniques employed. In certain employes, specific physical requirements must be maintained if they are to continue in their job category. Aircraft pilots, truck drivers, crane operators are examples. Physical performance and mental and emotional stability may become altered and lead to recommendation of job reassignment on a temporary or permanent basis. Special types of examinations are designed to meet particular job requirements. These may be of a screening nature in some cases and extensive in others.

Another point of view used for deciding on the timing of the periodic examination relates to what medical science and the practicing physician can accomplish in health maintenance through early diagnosis and treatment of disability and illness of degenerative and non-occupational disorder. Calendar age is the major criterion and it is generally felt that starting between the ages of forty and forty-five, an annual or biennial medical examination will yield sufficient medical findings to warrant the time and costs.

Preventive medicine starts in infancy and carries through childhood into school health programs. In the adult population, the preventive program is under direction of the practicing physician in his office, and in his contacts with industry and the working population. Is it realistic to assume that the physician on an on-call or on a part-time basis to small industry can himself perform periodic examinations on the work force? In some cases undoubtedly there is time available on a scheduled basis. In other plants, it is physically impossble, professionally unsound or otherwise not proper. However, it is the physician's place as a consultant and as a medical man to advise management based on the age of the employed group, the character of the work performed, and potential health hazard present as to what type of medical program of a periodic nature is of advantage to the employe, to the industry, and to the community as a whole. If the physician, working with

industry in this advisory capacity, can bring about a closer and more frequent relationship between the workers in the plant and the physicians in practice in the community, the health interests of all concerned will have benefited.

Summary

The private practitioner on call or part-time with industry has just as much responsibility for the prevention of illness and accident arising from the environment or the physical limitations of the employe as he has in the treatment of accident and illness arising out of occupation. Preventive medicine as relates to industry is very close to the professional interests and special training of the physician. It is the physician who is best qualified to relate the physical characteristics of an employe with his mental and emotional health to the demands of the job. Certainly job assignment, which is the responsibility of management, can be done more efficiently with the guidance and counsel of the medical man. The equipment, the machinery, and the materials with which the employe will be intimately associated are of interest to the physician for he must determine how each of these factors influences the physical and mental capacities, or limitations, of the employe. How will environmental factors (including such simple matters as the level of illumination, temperature, humidity, dust, presence of noxious fumes, or other agents) affect the physical performance and general well-being of the individual?

The physician of today is called on to play an important role in preventive medicine in industry because he is qualified through his knowledge of man as a biological being. The physical and emotional capabilities of man are affected by the machinery and equipment he is asked to operate, and are influenced by the environment with its physical and chemical attributes. For each variable, well-defined zones for comfort and health can be determined and ranges set where the efficiency of human performance and health is maintained.

Physicians will find that preventive medicine is no less interesting than curative medicine, for indeed the experience of curative medicine leads directly to experience in prevention of occupational disease and accident. Doctor Dwight H. Murray states, "I can guarantee that work in prevention of illness will be as satisfying as diagnosis and treatment of disease and injury. In this present age of prevention and protection of health, I see occupational health as a field of most exciting possibilities."

DIAGNOSTIC RADIATION

(Continued from Page 360)

at the present time is far greater than the hazards of leukemia. The current publicity concerning radiation hazards has neglected to mention the considerable benefit to many patients from such studies.

References

1. Brues, A. M.: Radiation as a carcinogenic agent. Radiation Research, 3:272, 1955.
2. Catcheside, D. G.: Genetic effects of irradiation with reference to man. Medical Research Council of England, 47/77, June 2, 1947.
3. Clay, J., and Clay, P. H.: The absolute intensity of cosmic radiation at sea level. Physics, 5:898, 1938.
4. Court Brown, W. M., and Abbatt, J. D.: The incidence of leukemia in ankylosing spondylitis treated with x-rays. Lancet, 1:1283, 1955.
5. Lewis, E. B.: Leukemia and ionizing radiation. Science, 125:965, May 17, 1957.
6. March, H.: Leukemia in radiologists. Radiology, 43:275, 1944.
7. March, H.: Leukemia in radiologists in 20 years. Am. J. M. Sc., 220:282, 1950.
8. Medical Research Council of England: the Hazards to Man of Nuclear and Allied Radiation. London: Her Majesty's Stationery Office, June, 1956.
9. National Academy of Sciences—National Research Council: The Biological Effects of Atomic Radiation, Summary Reports. 1956.
10. Sievert, R. M., and Hultquist, B.: Variations in natural gamma radiation in Sweden. Acta radiol., 37:388, 1952.
11. Simpson, C. L., Hempelmann, L. H., and Fuller, L. M.: Neoplasia in children treated with x-rays in infancy for thymic enlargement. Radiology, 64: 840, 1955.
12. Spiers, F. W., and Griffith, H. D.: Measurements of local gamma ray background in Leeds and Aberdeen. Brit. J. Radiol., 29:175, 1956.
13. Steiner, L. D.: Henry Ford Hospital. Personal Communication.
14. Stewart, A., Webb, J., Giles, D., and Hewitt, D.: Malignant disease in childhood and diagnostic irradiation *in utero*. Lancet, 2:447, Sept. 1, 1956.
15. Warren, S.: Longevity and causes of death from irradiation in physicians. J.A.M.A., 162:464, Sept. 29, 1956.

Additional Bibliography

Since this manuscript was submitted for publication, the following articles concerning life expectancy of radiologists have appeared in the literature.

Braestrup, C. B.: Past and present radiation exposure to radiologists from the point of view of life expectancy. Am. J. Roent., 78:988 (Dec.) 1957.

Failla, G. and McClement, P.: The shortening of life by chronic whole body irradiation. Am. J. Roent., 78:946 (Dec.) 1957.

Seltser, R. and Sartwell, P. E.: Ionizing radiation and longevity of physicians. J.A.M.A., 166:585 (Feb. 8) 1958.

Early Diagnosis of Disease at the Place of Work

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IT IS WELL to recognize that in the industrialized world of today, maintenance plays quite an important part in our very existence. We have known for many years that the machinery of industry must be inspected at intervals and its worn parts replaced if business is to continue without unnecessary and unexpected periods of interruption. Generally speaking, we know, too, that in many instances the finer the mechanism, the more delicate the tool, the more maintenance it may require. These problems have been accepted by industry, as has been evidenced by the inclusion of machine maintenance expenses in the general cost of production.

What about the operator of the machine? Is he not as important as the machine? Synonymous with "the right machine for the right job" is "the right man for the right job." Presently, one is dependent upon the other. In spite of our technological advances and modernization of instruments and procedures of manufacture, it still remains that in many instances outputs are in accordance with man's ability. A machine capable of 100 per cent capacity run by a man of only 50 per cent capability might conceivably produce at a rate of only 50 per cent of its potential.

Consequently, it has been good practice for many years to employ an individual in industry at a job that is commensurate with his abilities—one that he can do well with safety to life and property. Proper placement at work means well adjusted and contented employes; it means better attitudes toward the company with resulting greater freedom from accident proneness; it means a minimum of unavoidable absence caused by emotional problems of the job; it means a happier home and family and a more energetic community citizen; and for the employer, it means a more stable working force capable of greater production at lower costs.

Proper placement of the new employe, however, is only the first step toward insuring good health on the job, as well as away from the job. Continuation of this desired situation can be achieved best through a program of periodic re-examination and re-evaluation of the worker, with subsequent maintenance of the individual at work he can do best.

Today, more than ever before, industry is cognizant of having employes present on the job and working satisfactorily. I am not going to take the time to delve to any extent into the benefits this will accrue to both employer and employe—to the majority of you these are apparent. In approaching this objective many industries, both large and small, have instituted as a part of their medical program a practice of making it possible for each employee to have an interval "health inventory." The purpose of such a procedure is:

1. Discover disease in its incipient or remedial stages.
2. Determine any marked deviation from previously established health status.
3. Determine mental and physical compatibility of individual to his job.
4. Determine if health disorders found at a previous examination have been corrected.
5. Determine if the ordinary aging processes are being accelerated, and if so, why.
6. Health education—in general, and on an individualized basis. Certainly this is a very important part of our Medical Department activity in Phillips Petroleum Company.

In working areas where there exists a full-time industrial medical set-up or outside medical consultants versed in the importance of the periodic health examination, this phase of a company medical program presents no particular problem. At Phillips (and I am sure in other petroleum and allied industries such as drilling operations, booster stations along pipe lines, and seismograph camps, where the employees are few in number and at times migratory) employees may be fifty

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miles or more from any medical facility, let alone an office set up to comprehensively and effectively do this type of examination work. Situations such as these posed many questions—the answers to which, ten years ago, were not readily apparent.



Fig. 1. The first mobile medical unit of Phillips Petroleum Company (January, 1948).



Fig. 2. Buss-type mobile medical unit, Phillips Petroleum Company (1953).

At that time, the only realistic solution to this seemingly insurmountable problem was a medical examination clinic on wheels that could be used as a medium in reaching these groups of employes working in areas where this type of medical service was not available. Subsequently, the first mobile medical unit set up by our Medical Department in Phillips Petroleum Company was put into service in January, 1948, and this unit (Fig. 1) served its intended purpose well during our early experimental years in the interval or periodic examination aspect of our company medical program. Its staff consisted of a full-time physician, a registered nurse, and a medical technologist. It might be of interest to note here that similar programs were organized at about the same time in a like manner by Dr. V. C. Baird, Medical Director of Humble Oil Company and Dr. Thomas Mitchell, Medical Director of Carter Oil Company.[1]

Four years ago, this medical trailer-type clinic was replaced by a more modern bus-type unit. This unit (Fig. 2) is considerably more rugged in construction; however, with the present-day automotive improvements, it is relatively easy to handle. Clearance is enough to allow it to move with ease over roads and lanes that are off the beaten path. The bus itself is 33½ feet long and is divided into two separate sections: (1) the cab, and (2) the clinic area (Fig. 3). The clinic portion, which covers 193 square feet, is further divided into three compartments. The rear one is the doctor's office for general examination work and counseling; the center room is the laboratory and developing room; and the forward room contains the x-ray, electrocardiograph, visual acuity and audiometric testing equipment, refrigerator, scales, and general office set-up for the technologist (Figs. 4 and 5). The unit is

equipped with a common system for heating and air conditioning. A 300-gallon fresh water tank, with connected water heater, makes it possible to have hot and cold running water in the back and middle rooms. A 30 kw. generator, trailed behind the bus in transit, furnishes electricity for all the electrical appliances in the unit, including the 200 ma. x-ray machine. The over-all length of the unit, including the trailing generator, is just under 45 feet, the length limit of such motor vehicles and trailers established in many states by the Interstate Commerce Commission. An automatic auxiliary 3 kw. power plant in the front cab furnishes electricity for the refrigerator and lights when the larger generator is not in operation.

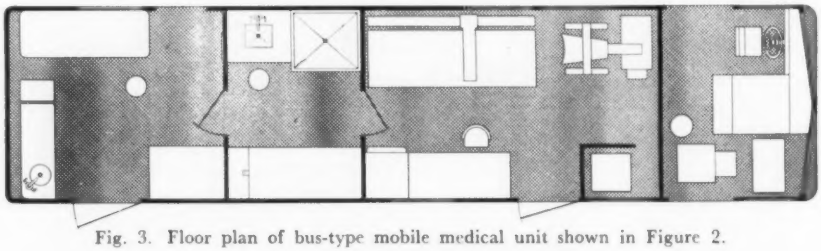


Fig. 3. Floor plan of bus-type mobile medical unit shown in Figure 2.

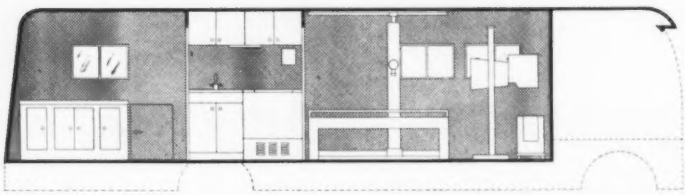


Fig. 4. Left inside view of bus-type mobile medical unit shown in Figure 2.

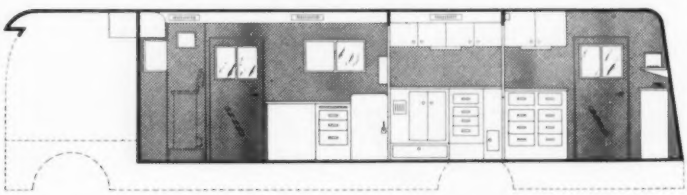


Fig. 5. Right inside view of bus-type mobile medical unit shown in Figure 2.

Procedure

A careful itinerary is always worked out so that all installations due for a visit know in advance when to expect the mobile unit. This enables each department to schedule its employes who desire the examination without hardship and interruption of daily routine. Figure 6 shows the states visited in one complete tour of the unit, beginning in 1955 and ending in February, 1957. This circuit included visits to Phillips installations in twenty-one states, with a total of 7,732 employes examined.

Every examination is completely voluntary and includes a thorough physical and a careful medical history, allowing for time, if needed, for ventilation of emotional problems. The laboratory work includes urinalysis, blood type and Rh-factor, hemoglobin (when indicated), a 4 x 5 photo fluoroscopic chest x-ray, audiogram, and an electrocardiogram on all employes fifty years of age or older. The electrocardiogram is also done on others under age fifty if for any reason the examiner may suspect heart disease. Other x-rays are made of backs, extremities, et cetera, when deemed necessary by the examiner. There is no set time limit for each employe's examination. With younger people it may be possible to com-

plete the review in fifteen to twenty minutes; others may require as long as an hour. In each instance the physician always takes sufficient time to unhurriedly discuss his medical findings and that warrant modification of an employe's work or a decided change in his job classification. When this occurs, and after the family physician has confirmed the diagnosis, the situation is thoroughly



Fig. 6. States covered during periodic examination program of Phillips Petroleum Company, 1955 through February, 1957. Total employes examined—7,732.

advise the employe in regard to any health problem found. If the entities discovered warrant, the employe is advised to consult his personal physician for further study and necessary treatment.

A final review and study of each case is made by an internist in the Company's central medical office in Bartlesville, Oklahoma, and subsequently an individual narrative report is sent to each employe examined in the mobile unit. Included in such a report are positive medical findings, their significance, and recommendations—when indicated—urging the employe to have his case followed up and cared for by his own family doctor. At the same time, if it has not already been recorded on the individual's medical form by the examining physician, the name and address of the family doctor is requested, as well as permission to send to the family doctor a copy of any pertinent portion of the respective employe's company medical report. On the average, sixteen to seventeen examinations are completed each day.

Occasionally, health problems are discovered reviewed with the employe involved and his consent obtained before any recommendations are made to his department. The primary purpose is, of course, to keep him working while the family physician is curing his malady, at a job that is safe to himself and others. Transfers effected in this manner may be temporary or permanent, depending on whether or not the medical problem is remedial. Once the employe understands all the implications he is willing, almost without exception, for his department and the Medical Department to discuss the job changes indicated for the protection of all. Proper liaison is maintained with the private physician so that, when necessary, he will be able to help us move the employe involved to a suitable job, and also to let us know when the employe is whole again. After health problems have been corrected and the employe returns to his normal health status, he is returned to his usual job.

No definitive treatment is extended through this program. The cost of follow-up medical care for personal health problems detected through

TABLE I. SUMMARY OF PHYSICAL FINDINGS OF EMPLOYES EXAMINED IN MOBILE UNIT—1956

	New	*Old*	*Total*
Alcoholics	1	2	3
Allergy			
Asthma		13	13
Hay Fever		18	18
Other	2	7	9
Total	2	38	40
Back	4	68	72
Blood Abnormality			
Anemia	5	3	8
Cardiovascular			
High Blood Pressure	66	72	138
Valvular Disease	3	5	8
Coronary Disease	18	55	73
Other	4	5	9
Total	91	137	228
Cysts			
Pilonidal	1	2	3
Other		1	1
Total	1	3	4
Dermatitis			
Industrial (Suspected)	6	1	7
Other	28	43	71
Total	34	44	78
Ears			
Structural Defects	6	23	29
Hearing Defect	2	43	45
Total	8	66	74
Eyes			
Structural Defects	10	24	34
Vision	202	35	237
Other		2	2
Total	212	61	273
Gallbladder	2	20	22
Gastrointestinal		64	64
Genitourinary			
Kidney		7	7
Prostate	10	7	17
Urine	2		2
Other	3	5	8
Total	15	19	34
Glandular	2	1	3
Hernia			
Non-job-connected	25	25	50
Job Dissatisfaction (overt)		2	2
Joints			
Arthritis	2	20	22
Non-Inflammatory Derangement		16	16
Other	1	6	7
Total	3	42	45
Liver		5	5
Lungs			
TBC	1	1	2
Other	23	9	32
Total	24	10	34
Metabolic			
Diabetes	2	11	13
Other		6	6
Total	2	17	19
Migraine	1	8	9
Miscellaneous	9	15	24
Musculoskeletal	1	28	29
Nerve Disorders			
Neurologic	1	14	15
Psychiatric	0	0	0
Emotional Disturbance	1	2	3
Multiple Sclerosis	1	1	2
Total	3	17	20
Nose	2	9	11
Obesity			
With Associated Disease	19	77	96
Without Disease	97	151	248
Total	116	228	344
Rectal			
Hemorrhoids	27	21	48
Other	2	2	4
Total	29	23	52
Sinus		4	4
Syphilis			
Treated (old cases)		3	3
New (Status being Determined)	1		1
Total	1	3	4
Teeth & Gums	52	30	82
Throat	2	2	4
Tumors			
Skin	1	1	2
Mucous Membranes	1	1	2
Other	5	4	9
Total	7	6	13
Underweight	4	15	19
Varicocele	4	1	5
Vascular			
Buerger's Disease		2	2
Arteriosclerosis		1	1
Varicosities	22	18	40
Other		3	3
Total	22	24	46
Grand Totals	684	1040	1724

this program is borne by the employee. Of course, defects found that are job-connected are handled in accordance with the compensation regulations.

Results

In the beginning, as you can imagine, many of our older people regarded this program as a part of a company spying system, and even a method by which some of them could be eliminated from their jobs. Today we rarely encounter such feeling. The attitude of most of the remaining skeptics has shifted from either suspicion or mild curiosity to one of enthusiasm for the over-all program of the mobile unit. This is evidenced by the fact that in many areas we now are having 100 per cent participation.

The voluntary co-operation and enthusiasm of departments and employes has resulted in discovery of many potentially serious medical problems and even more minor, but troublesome ones. Table I shows the health findings resulting from the 1956 tour of the mobile unit. In addition, this table shows health problems discovered at the time of the previous examination. Most have been corrected or improved sufficiently to permit the employe to continue safely in his usual job. Even the more serious medical problems have been helped by aiding the employe to get proper

medical care, with the result that he remains productive in some capacity rather than a total loss for lack of proper medical evaluation in relation to his job.

Table II is interesting in that it gives comparable data on essentially the same group of people in the same geographic areas, for the years 1954 and 1956. Some of the highlights of this comparison are:

1. Significantly fewer cases of high blood pressure—almost half of these being "new" cases.
2. Significantly fewer obese personnel. (Obesity is arbitrarily defined as 20 or more pounds over upper normal height and build.)
3. A substantial number of hernias found in 1954 had been repaired when employes were seen again in 1956. The same was true with respect to hemorrhoids, dental and visual (refractive) problems.
4. A review of "tumor" conditions found in 1954 revealed that several potentially cancerous growths were removed as a result of the visit.
5. Coronary disease, as might be expected, remained much the same. Only 9½ per cent of the coronary cases seen in 1956 needed some job restriction. It is also of interest that of seventy-three coronary cases seen in 1956 in the Mobile Unit only 9 per cent experienced their first attack at work and the majority of these were not under stress or strain at the time.

Fifty-seven per cent of the significant cases of coronary disease were found initially as the result of electrocardiograms made in the unit, there being no other evidence of trouble. It is fully recognized by this department that the electrocardiogram can be a double-edged sword. No case was tagged as a "coronary" unless the electrocardiogram was interpreted as being unequivocally abnormal when compared with a previous "normal." Employes notified of abnormal findings were treated in a *non-alarmist manner*, and data was sent to the personal physician with the employe's permission. This has often permitted early definitive care by the personal physician with prevention of more serious trouble and maintenance of serviceably good health.

TABLE II. MEDICAL MOBILE UNIT

	1954		*1956*
Total Number Examined	3,796		3,936
High Blood Pressure	158	New	66
		Old	72
		Total	138
Coronary Disease	61	New	18
		Old	55
		Total	73
Dermatitis			
Non-Industrial	43	New	28
		Old	43
		Total	71
Suspected Industrial	6	New	6
		Old	1
		Total	7
Ears			
Hearing Loss	41	New	2
		Old	43
		Total	45
Eyes (Vision)	118	New	202
		Old	35
		Total	237
Hernias (non-job-connected)	42	New	25
		Old	25
		Total	50
Lungs	37	New	24
		Old	10
		Total	34
Obesity With Associated Disease	140		96
Without Associated Disease	265		248
Total	405		344
Hemorrhoids	70	New	27
		Old	21
		Total	48
Teeth	76	New	52
		Old	30
		Total	82

Summary

Phillips Petroleum Company has successfully used the mobile medical unit for the past nine years in the program of early diagnosis of disease at the place of work. While the program may be considered as one of case finding in the individual, it still remains that, as a rule, the earlier a diagnosis is made, the more amenable the disease is to cure or control. That this program is needed is evidenced by the number of medical problems detected in individuals who were working every day and seemingly in good health. The great majority of these conditions were discovered in their incipiency and subsequent medical treatment was effective without unavoidable absenteeism. As one might expect, however, a few severe cases were found which warranted loss of time from work for proper and adequate care. It might be of interest to note that on each successive tour of the unit, considerably fewer severe cases were uncovered.

In this field health program, as in all of our company medical activities, medical ethics are closely adhered to. The doctor-patient relationship must be maintained, employe confidences must be respected, if this work is to serve its intended purpose.

In the same manner, the prerogatives of the family physician are to be preserved. As a part of our company health program this preventive

(Continued on Page 380)

Today's Challenge in Public Health

By John D. Porterfield, M.D.
Washington, D. C.

ONE of the most urgent challenges in public health today, I believe, is to build a bridge between the local public health agency and the office of the practicing physician.

Within this general challenge, there are, of course, numerous and varied items. The responses of public health personnel will therefore be varied, and sometimes may seem far removed from the physician's office. The specific challenges and responses, however, are pointed in the direction of the clinician. The reason is that the problems of prevention today, whether they have their origin in new environmental hazards or in hereditary or constitutional disorders, cannot be solved without the active participation of practicing physicians.

To illustrate, fifty years ago the prevention of typhoid fever and other gastrointestinal infections constituted a major challenge to public health. Scientific research and technology had made it clear that prevention at the source could be achieved by ensuring safe water and milk supplies and proper sewage disposal. The co-operation of practicing physicians with public health officials was desirable, and in many instances it was a determining factor in persuading communities to take action, but it was not essential. In urban communities, public health officials had only to convince a relatively few business and political leaders that the proposed sanitation facilities would achieve the desired results. Control measures could be applied without any action on the part of physicians, or, indeed, of the individuals and families who benefited by community sanitation.

Today's problems are of a different order. The control of chronic diseases, the prevention of deaths or severe disabilities from accidents or from hereditary disorders, all involve the personal concern and action of practicing physicians. For here, no "mass" methods are available. The close relationship of physician and patient is the key to modern prevention. Far more than in the past, the application of preventive methods to infectious diseases also is achieved primarily by the practicing physician. We see this in the nationwide action of physicians in the most recent vaccination programs for paralytic poliomyelitis and Asian influenza.

Even in the control of new environmental hazards, the individual action of the practicing physician is essential to success. The control of radiation exposure, for example, cannot be achieved by the decisions of a few individuals at national, state, or local levels. One of the major sources of exposure is the medical use of radioactivity. If diagnostic and therapeutic uses of radiation are to be applied with maximum safety for patients, the desired result will be achieved only through the personal concern and action of every practicing physician in the country, supported by the joint action of medical and public health groups.

How, then, can the public health physician go about meeting his basic challenge to bring the practicing physician into the solving of today's problems of prevention? Most of us in public health practice have received a great deal of advice on this question during the past few years. As a rule, the advice goes something like this: "Public health agencies should co-operate with local medical societies in the development of community programs, especially in new fields." This worthy admonition may be followed by mention of a series of "fields" in which co-operation should be sought, with description of a few specific activities which have been initiated in some communities.

Still, neither the general advice to co-operate with the medical society nor the expressed need for public health action in new fields seems adequate as a bridgehead from which a public health physician might throw a span between himself and the practicing physician. We in public health must have something to offer that will stimulate the practitioner's interest in our organization as a real and present help in the solution of medical problems he meets daily. We do not have to convince

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Address to the Section on Public Health and Preventive Medicine, Annual Session of the Michigan State Medical Society, Grand Rapids, Michigan, September 26, 1957.

Dr. Porterfield is Deputy Surgeon General, U. S. Public Health Service, Department of Health, Education, and Welfare.

him that chronic diseases, mental and neurological disorders, accidents, diseases of pregnancy and the perinatal state are major causes of illness and death. We do not have to convince him that care of long-term patients, whatever their age, is a perennial problem for himself, his patients and his community.

We do have to convince him that public health agencies are in a position to help solve these problems now, without jeopardizing the practitioner's stake in the health supervision and medical care of individual patients. And we have to convince him that public health agencies are capable of developing new community services which will prove as valuable to medical practice as older programs of communicable disease control and sanitation, without invading the private practice of medicine.

For the past quarter century, there has been a strong—though by no means universal and constant—conviction on the part of practicing physicians and medical groups that any public health action directed toward personal services would be an opening wedge for the socialization of medicine. It is no secret that repeated efforts in the late 1930's and immediately after World War II for the establishment of national compulsory health insurance served to strengthen this opinion and to extend it farther in medical circles. During the same period, the United States Congress and state legislatures have repeatedly broadened the responsibilities of public health and related agencies and have added many new health programs. All this has happened with the support of medical groups, and there has been no socialization of medicine. On the contrary, while this general strengthening of health resources was occurring, voluntary insurance plans have grown in volume and scope and many large industrial groups have developed comprehensive medical programs for their members. As a result, the former impetus toward a universal national health insurance plan has waned.

However, we in public health cannot disregard the fact that medical opinion may have had an influential relationship with the financial strictures under which public health programs—especially in local communities—have operated during the past ten or fifteen years. Nor can we disregard the fact that these same financial strictures have helped to buttress another medical conviction that public health physicians and their staffs have competencies only in the traditional fields of communicable disease control and sanitation.

The physician's fears of socialized medicine and his opinion that public health can play only a limited role in solving contemporary medical problems comprise only two of many factors contributing to the handicaps under which public health physicians operate. But they are factors and it is up to us to take the initiative in dissipating the fears and changing the opinions.

Fortunately, the wall of distrust and misunderstanding is beginning to crumble. There is better rapport between national, medical and public health groups today than we have known for a decade. More state and local medical societies and health departments are venturing together into new fields.

You would be interested, for example, in a little leaflet recently issued by the Medical Society of the State of Pennsylvania in co-operation with the Mellon Educational and Scientific Trust. It is entitled "A 'New Tool' for Physicians," and the "new tool" is a county health department. The leaflet sets forth some of the advantages a physician may derive from a health department, including a list of services "without cost of time or money to the physician." Although the list is predominantly of classic local health functions, it does mention referral of patients with *chronic* illness, and "advice . . . in unusual situations: viz. poison control centers, civil defense emergencies, (and) environmental hazards from air-borne radioactive contamination."

The leaflet ends with this statement by Dr. Elmer G. Shelley, President of the Pennsylvania State Medical Society:

> "The public health physician is a specialist in the field of preventive medical services and public health practices. He and his staff of professional and technical personnel and the practicing physician can advisably integrate their mutual interests and activities to effect better health protection for all the people and their respective communities through preventive measures and services."

This, I contend, is meeting the public health physician more than half way. Similar rapprochements are going on in other parts of the country. But, as a distinguished practicing physician, a member of the Surgeon General's Advisory Committee on Medical Practice Relations, told us recently: "Here and there the old hostilities re-

main; the old fears that public health will take over and treat patients once they get a toe-hold, even in a screening program."

Now human beings have not been notably successful up to date in their ways of dealing with hostility. We still pretty much follow the old instinctual drives toward flight or fight, even though neither response has been permanently or consistently effective in the whole of recorded history. Our world today has shrunk, our own society has become so complex, that flight or fight are less and less successful, less and less possible.

In some relationships, however, we have learned a way to disarm hostility and convert it to friendship and loyal support. Certainly it is the toughest way and the one least acceptable to us proud mortals. It is to turn a critical eye upon ourselves, learn how we may have created hostile feelings in others, and deliberately "cast out the beam" that has distorted our vision of ourselves and of others. Once this is done, we are ready to deal with hostility on a rational basis. Our opponent may not be similarly prepared. Forces entirely beyond our personal control may be the dominant causes of his hostility. Yet we must take this step of self evaluation, otherwise we will never discern the roots of hostility, the ways we have fostered their growth wittingly or unwittingly, and the next steps we must take to pluck them out.

It must be admitted that fears and limited views are about as widespread in public health as in medical practice circles. If the practicing physician fears "socialized medicine," the public health physician fears the absorption of his preventive programs by medical groups. If the practicing physician still thinks of the "health officer" as a broken-down political hack, scarcely capable of the paper-pushing and nuisance-abatement chores which seem to be his only activities, the public health physician thinks of the general practitioner as an opinionated codger still practicing "horse-and-buggy medicine," who depends on the odds rather than the laboratory to guide his diagnoses, on the detail man of some pharmaceutical company to tell him what new miracle drugs to prescribe.

In every such case, "t'ain't necessarily so." As members of the medical profession, both practicing and public health physicians must guard against such stereotypic views of their colleagues. In public health especially, we must develop a much keener perception of the modern practitioner's competence, his wider knowledge, and his daily problems.

To that end, I would suggest that public health physicians make it the first order of business to possess an intimate knowledge of the climate of medical opinion and practice in their communities. The medical society and other professional groups provide the channels of contact and are, of course, important focal points for joint planning and program development. But I am thinking of a more personal acquaintance.

We in public health should be able to converse with a substantial proportion of our medical communities as freely as with our public health colleagues. In such "feet-on-the-desk" relationships, we can learn far more about chronic disease control and care of the aging, for example, than by reading a paper on screening programs at a society meeting or by presenting the committee on public health and preventive medicine with a preconceived plan for the improvement of nursing homes.

We are supposed to know all about chronic disease control and health of the aging, you may say. Public health physicians do know a great deal and have some ideas they would like to see put into action. But all of us need to learn much more, especially what the practicing physicians think of our ideas.

It is just possible, for example, that a substantial proportion of the general practitioners and gynecologists in a community is already routinely applying the cytologic test for cervical cancer. Perhaps they have some problems they would like to have solved in this "new field" before accepting a public health proposal to put on a "community-wide demonstration." Perhaps they have some ideas, quite different from the "demonstration" approach, that may, for all we know, bring about a more productive application of the technique than the "drag-net" approach so dear to the hearts of administrators in official and voluntary health agencies.

In considering the application of other specific public health techniques, we may find that a similar situation prevails in a community. The public health physician must know the extent to which practicing physicians are using a given technique, be it a screening device or a prophylactic treatment. He must anticipate the technical problems inherent in its application—as these problems exist in the community. In connection

with the cytologic test for cervical cancer, what is the extent and quality of pathologic laboratory services in the community, for instance? In connection with rheumatic fever control, is rapid laboratory service available for confirming diagnoses of streptococcal sore throat?

Without such first-hand medical information about the community, the public health physician is likely to waste some of his resources on a needless campaign or to defeat the purposes of a demonstration by failure to solve the technical problems that concern practicing physicians and their patients.

These precautionary remarks are not intended to discourage public health physicians from moving forward into new fields with all due speed. On the contrary, my earnest desire is to encourage every public health physician to strive for increased and more productive activities in local communities.

Many of the "new fields" in which we are moving forward, however, have long been occupied by practicing physicians or have not been touched by health services. The success of new public health activities, especially in local communities, depends very heavily upon the public health physician's enlightened response to medical opinion and upon his wisdom in selecting problems and methods which will command the keen interest and real participation of practicing physicians.

Both groups should recognize that in the past the campaign approach to prevention has predominated in public health action—a result of many factors too numerous and complex to discuss satisfactorily at this hour. In medical practice, the highly individualistic approach—the one-to-one relationship of physician and patient—has predominated. We and our colleagues in private practice know that neither approach alone will suffice to solve today's problems of prevention. Somewhere between the two extremes, public health and practicing physicians must seek and find the methods most likely to produce a high yield in the setting of the particular community. And we must think of the high yield in terms of unknown cases accurately diagnosed and brought under treatment, fewer persons in all age groups who are severely disabled by prolonged illness or accidents, and—ultimately—reduced death rates from the major diseases, and better personal health for all the people.

Perhaps the soundest and most profitable approach to new fields is the one that public health claims as its unique contribution to medical science—epidemiology. Certainly it is an approach that should spark the interest and activity of practicing physicians. Many practitioners are eager to take part in studies that will teach them more about the problems they are facing in the daily line-up of patients. Whether the community is a rural county, or a small town, or a big suburban area, an epidemiologic study of heart disease or atherosclerosis or mental illness may yield important clues to prevention or to more effective management of cases.

Medical interest in epidemiologic research is evidenced by a study the Public Health Service is participating in at the present time. The entire medical profession in six northeastern counties of North Dakota and neighboring areas of Minnesota and Canada have undertaken a year's study of coronary disease. All the practicing physicians have banded together to report and follow up every case that comes to their attention. The origin of the study resulted from earlier statistical studies showing significantly lower death rates from coronary disease in males residing in rural areas. The purpose of the present study is to determine what factors, if any, in this farming country contribute to the lower death rate among farmers.

Through epidemiologic investigations and other experimental studies, public health and practicing physicians can develop new methods suitable for community application. Public health physicians can draw on outside resources for specialized skills and facilities. But whenever possible, they, their staffs, and their medical colleagues should be directly involved in scientific research.

A community health department is the natural field of epidemiologic studies. Through working arrangements with universities and graduate schools of public health, a department can contribute to the training of epidemiologists and at the same time derive the benefits of research activity to its staff and the community at large.

Planning is a primary function of public health organizations. This basic operation, also, can become a major approach to practicing physicians. In fact, Dr. Burney in a recent address gives joint planning by public health and medical groups the highest priority. He stated that:

"It is an inescapable fact that the full application of current and future scientific findings . . . requires facilities and skills—and often financial resources—which

the individual physician and the individual patient cannot themselves provide. Obviously, then, a state or local medical society or a health agency contemplating an attack on chronic disease must find a *modus operandi* with each other. Joint planning by the two organizations is essential before action is taken. As the plan develops, both . . . will want to bring other interested groups into the planning process, for the ultimate action program will require the participation of many groups."

Intimate knowledge of medical opinion and practice in the community, epidemiologic research, joint planning: these three approaches by no means cover the gamut of the public health physician's choices in bridging the gap between this agency and the practicing physician. There is perhaps time to mention one more that actually pervades all of the others: effective communication.

Some of you may have heard complaints that communication, as practiced in health and related organizations, is not as effective as it should be. I have heard some health workers describe this deficiency in much stronger terms. Invariably, the particular break in communication is, justifiably, attributed to top management, division chiefs, supervisors, or officers of co-operating agencies.

Effective communication is a much more complex process than the mere transmission of instructions or information. Paul Pigors of Massachusetts Institute of Technology, a few years ago, told a group of Public Health Service executives:

"A message may mean what it says to you, but . . . everybody who reads it will interpret it as colored by his own background and experience. It may mean an entirely different thing to him, depending on his particular attitudes, his fears, and his particular preoccupations of the moment. So . . . always ask yourself what is likely to speak in people's minds—as a sort of accompanying overtone—besides your own message."

This means, I take it, that the sender of information must give the receiver time to play back the message as *he* interprets it. This sets up communication as a *joint* activity.

Then, too, we have to remember that actions speak louder than words. When top administrators and sub-officials contradict by their actions the fine policies and philosophies they have enunciated, employes and outside colleagues are likely to respond with far less than their maximum abilities and enthusiasm. The citizens in our communities whose co-operation we solicit are likely to respond in the same way.

The key objective of communication is to get an appropriate response. The public health physician who would bring together the output of the health sciences and the outreach of his community for effective services can elicit such responses through effective communication. To do so, he must create an atmosphere of mutual understanding and respect in which he and his entire staff, medical groups, and other community agencies learn to play on the same team.

Every participant is liberated to make his fullest contribution in such an atmosphere. This kind of communication is, indeed, the foundation of teamwork. If the administrator can learn to work with his staff members and his outside colleagues as one of a group, rather than as a top-sergeant, many of his problems will be resolved. The interaction of people thinking and freely expressing themselves in a group generates a force for action —for dynamic performance—such as is too often lacking in over-organized programs. This is a lesson which both public health and medical administrators need urgently to learn — at all levels: national, state, and local.

EARLY DIAGNOSIS OF DISEASE AT THE PLACE OF WORK

(Continued from Page 375)

and diagnostic work is not in competition with the local private doctor when properly handled, but rather is an adjunct to his practice.

Success is dependent upon the willingness of all involved to co-operate—the employe, the union, management, and medicine. One without the others would be lost in this important effort.

This program has filled a real need in Phillips Petroleum Company and it is my opinion that the net result is an employe group that is healthier, happier, and better adjusted; a company that has a greater productive output; and an economic situation that is good for all.

In visiting with Dr. V. C. Baird of Humble Oil Company, and Dr. Thomas Mitchell of Carter Oil Company, I learned that they, too, are enthusiastic about this phase of their company medical programs.[1]

[1]Personal discussion with Dr. Baird and Dr. Mitchell.

Can We Rely on Modern Medicines?

By George P. Larrick
Washington, D. C.

IN ORDER to appreciate fully the magnitude of the subject, it is well to review briefly the development of drug manufacturing. Throughout the ages, man has searched for drugs that will accomplish a specific good, that will have a particular benefit on the body or a curative effect on a specific disease. Periodically, he has found what he is looking for. The Egyptians used opium centuries ago. For 300 years modern man has used Peruvian bark or, more recently, its alkaloid quinine, in the treatment of malaria, and of course digitalis, ergot, and iodine long have been recognized as having specific beneficial effects.

About fifty years ago, when the arsphenamines were found to be specifics for treating syphilis, there came a dream that progress in the chemical laboratory might lead to the age of chemotherapy, an age in which a drug could be tailored to accomplish a specific purpose. When insulin was developed as the specific treatment for diabetes in the early 20's and other glandular products followed, it became apparent that man might make the dream a reality.

The real start of the chemotherapeutic age probably came when a German firm began experimenting to determine the therapeutic effects of some of its synthetic dyestuffs. It discovered that one dye possessed remarkable activity against some of the pathogenic streptococci. This was followed by the rapid development of sulfanilamide and a host of other sulfonamide drugs. The eve of modern drug research was at hand. The medical profession and the drug industry, which had regarded a major discovery in this field in each twenty-five years as very satisfactory progress, realized that it might be possible to achieve new major research discoveries with greater frequency. The drug manufacturing industry intensified its research efforts. It began to extend laboratory experience on drugs directly to large-scale industrial production. This direct transformation of scientific experience to industrial operation which has occurred in this and three or four related fields is probably unique in human history. It has brought problems.

After the commercial marketing of the sulfonamides, there came two tragedies that were to influence drug development in the United States in an unprecedented way.

A small pharmaceutical house, in an effort to achieve greater pharmaceutical elegance, dissolved sulfanilamide in a toxic solvent. The resulting product killed over 100 people. It is likely that the wave of public apprehension that followed was a major factor in the passage of the Federal Food, Drug, and Cosmetic Act in 1938, with its strict controls over the marketing of new drugs. The new-drug section of this law, which I will discuss in more detail later, was one of several factors that stimulated manufacturers to accumulate a large body of medical and pharmaceutical knowledge about a new product before marketing it; it stimulated the application of thoroughgoing, carefully designed investigative procedures which have materially increased our knowledge of modes of drug action, and has played a part in stimulating some of the modern advances in drug manufacture.

I do not maintain that drug research would have slumped without this law, nor that without it the drug industry would have abandoned the high ideals that have guided it for decades. But it certainly has had a profound influence in molding the pattern of modern pharmaceutical research.

The second tragedy was World War II.

In 1942, the Japanese moved into the Netherlands East Indies, thus cutting off most of our supply of quinine. Faced with the need of fighting a war in tropical jungles without sufficient quinine to control malaria, the Government and the pharmaceutical industries took extraordinary steps and before the end of the war a synthetic antimalarial drug, quinacrine (first synthesized in Germany in 1930) was being produced in sufficient volume to permit its universal use by troops in the Pacific area. Even more important, quina-

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crine proved to be more effective and less toxic than quinine. Shortly after the close of the war other synthetic antimalarials were developed.

The war brought about the development of penicillin, first reported in 1929 in a paper by Dr. Fleming but virtually lost until the war years when a team of scientists at Oxford University purified the drug, studied its pharmacology in animals, and made the early clinical trials in man. By 1941, Britain enlisted American aid in the production of enough penicillin for adequate clinical studies and ultimately for the allied military needs. There followed the production of penicillin by laborious surface culture methods, then the development of the deep vat fermentation process which permitted large-scale commercial production. From twenty-nine pounds in 1943, the output of the pharmaceutical industry increased until adequate supplies were available for the allied invasion forces one month after D-day in Europe. It is significant to note that the pharmaceutical companies today are producing crystalline antibiotics at an annual rate of nearly 800 tons.

There are a number of other examples of the trend to very rapid development of a pharmaceutical product from laboratory to commercial production. Newer antibiotics, steroid hormone-like compounds, the antihistamines, the anticholinergic agents, and numerous other drugs are examples. One of the fastest developments was that of oxytetracycline, which was in full factory production nine months after the antibiotic was first isolated from a sample of soil. Approximately two-thirds of the ethical pharmaceuticals sold in 1956 were unknown in 1949.

This is fine provided the drugs that are being marketed today are safe and provided they can be relied upon by the physician and the patient. Let us look, then, at the measures being taken to insure the purity and safety of modern drugs.

The pharmaceutical manufacturers deserve a great deal of credit for spending the funds necessary to permit adequate improvements in their manufacturing and control procedures. In about 1900, drugs were manufactured in small batches, frequently in local drug stores, and more often than not with no analytical testing of the finished product. Today, most of them are produced in large quantities under the most rigorous control from the time the raw material enters the plant until the finished package is ready to ship.

It is interesting to compare the drugs in current use and the specifications which they must meet with those on the pharmacist's shelf only thirty years ago. The United States Pharmacopeia X and National Formulary V, which were in effect in 1926, contain largely descriptions of vegetable drugs and inorganic chemicals. In many cases, the tests for identity and methods of assay, when present, were nonspecific and of doubtful accuracy. Synthetic organic drugs and the purified principles of natural products were rare. The U.S.P. X contained specifications for only one tableted material. It did not include encapsulated or injectable drugs.

Today the U.S.P. and N.F. contain specifications not only for the basic drugs used by physicians but also for their dosage forms. Most of the drugs recognized in these compendia are synthesized or represent the purified active ingredients of herbs or animal products. The compendia provide standards to be met by the pharmaceutical manufacturers in the production of drugs and in their fabrication and dosage forms. And the compendia standards, showing as they do what constitutes good manufacturing practice, also exert a very healthy influence on the production of nonofficial drugs. In general, the nonofficial drugs meet the same high standards as official ones.

The role of the Food and Drug Administration in this operation is two-fold. We rely to a great extent upon the manufacturers to tell us what they can and cannot do in the way of meeting improved standards. Many years ago the two largest associations of drug manufacturers established a Combined Contact Committee which studies assay procedures for drugs and recommends tolerances for various drug compounds. Through the work of this Contact Committee and the Revision Committees of the United States Pharmacopeia and the National Formulary, drug standards have been raised continually.

Our own laboratories during the past twenty years have developed accurate, reliable chemical procedures for the evaluation of many drugs that were previously examined by tedious, nonspecific bioassays. Notable advances of this type have been made for some of the vitamins, ergot and ergot alkaloids, estrogenic and androgenic hormones, epinephrine, purified digitalis glycosides, Rauwolfia serpentina, and many of the antibiotics. Our laboratories have pioneered in the applica-

tion of new techniques for the analysis of drugs.

The second big role of the Food and Drug Administration is the administration of the new-drug section of the Food, Drug, and Cosmetic Act. This section requires, in effect, that before a new drug may be marketed for commercial use it must be studied adequately to show that it is safe and the reports of the studies must be submitted to a review by the Food and Drug Administration which, acting for the people, permits a new-drug application to become effective if safety has been established.

We expect each new-drug application to report a sound pharmacological and toxicological study which shows, among other things, the toxic effects of the drug, the margin of safety—that is, the relationship between the effective dose and toxic dose—the manner in which the drug is absorbed and excreted, its irritating or sensitizing properties, and many other types of information needed by scientists to reach a sound conclusion as to the safety of the product for widespread administration to thousands or millions of patients. The new-drug application also contains specifications to be followed by the manufacturer in selecting his raw materials, manufacturing the drug product, and the procedures used in compounding and packaging it to guard against accidents that might harm the consumer.

The advantages of these controls are twofold. In the first place, they require all manufacturing houses desiring to ship new drugs across state lines, to maintain satisfactory manufacturing controls, acceptable quality standards, and to perform reliable pharmacological and clinical testing of new products before marketing them. These, incidentally, are the types of standards that the more reliable drug houses followed even before the new-drug provisions were written into the law. Additionally, as a book published by one of the larger pharmaceutical houses states:

"The law has profited the whole industry to the extent that the public, including the medical profession, now takes for granted the purity and quality of all drugs on the market and their safety when used in accordance with labeled instructions. . . . The new law has also been a factor in bringing about increased co-operation within the pharmaceutical industry directed at improved product standards and controls."

I think we can all conclude that due to the very enlightened pharmaceutical manufacturing industry in this country today and to the safeguards in the new-drug section of the law which the industry upholds, we have in the United States the finest medicines available anywhere in the world and we have a climate that encourages, to the fullest extent, future chemical and clinical research which is discovering and making available new drugs at a rate never before achieved in the history of the world.

The Food, Drug, and Cosmetic Act further safeguards consumers by requiring drugs that are habit forming, and other drugs that cannot be used safely without adequate medical supervision, to be dispensed only upon the authorization of a practitioner licensed by law to administer the drug (the authorization must be in writing, or if oral, must be reduced promptly to writing). This requirement was written into the law a few years ago by the Durham-Humphrey amendment which was sponsored by two pharmacists—Congressman Durham and Senator Humphrey. It is not necessary for me to emphasize to this gathering the importance of this requirement to the public health.

Before closing this discussion I would like to point out some problems closely related to those of drug safety which will be of real interest. We do not have in the Federal Food, Drug, and Cosmetic Act a pretesting provision for chemicals to be added to foods comparable with the new-drug section for drugs. Legislation is pending in the present session of Congress designed to require adequate pretesting by law. We in the Food and Drug Administration favor adequate legislation on this point. We request your study of the matter and your support of adequate legislation. It is appropriate here to quote the report of the Interim Committee on the Social Aspects of Science of the American Association for the Advancement of Science, which was released in December, 1956. The Committee stated with regard to food additives:

"The enormous growth of industry based on organic synthesis coupled with the already mentioned tendency toward rapid exploitation of scientific knowledge has resulted in a great increase in the number of man-made compounds now used in foods or otherwise ingested or absorbed by humans. The period of use of many of these substances has been rather short, and possible undesirable long-range biological effects have not yet had time to appear. Laboratory methods for studying delayed biological effects, such as carcinogenicity are unfortunately difficult to manage, and equivocal in interpretation.

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The Johnson Operation for Acquired and Congenital Coronary Insufficiency

By Aran S. Johnson, M.D., and
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Detroit, Michigan

THE DAY has arrived when patients with coronary artery disease (both acquired and congenital) can be treated successfully by surgery. The future of these patients no longer needs to be clouded with psychological and physical restrictions and limitations. The problem of coronary artery atherosclerosis remains unsolved. However, through the monumental work of Beck and others, surgical methods for increasing the blood supply to the myocardium now offer a patient with coronary artery disease a productive and bright future.

Pathogenesis of Coronary Artery Disease

There are two types of coronary artery disease—acquired and congenital. In the acquired type, the characteristic findings are intimal thickening, degeneration and plaque formation involving the vascular tissue. These vascular changes are features of atherosclerosis. The etiology of this disease remains unknown. The etiological factors which may contribute to this disease process will not be discussed since they remain controversial.

In congenital coronary insufficiency, the characteristic findings are endocardial and subendocardial fibrosis, severe degeneration and diffuse connective tissue displacement of the myocardium. The etiology of this disease appears to be on a developmental basis. Injection studies of the coronary arteries reveal poor collateral and inter-communicating branch formation. In a number of cases the left coronary artery arises from the pulmonary artery. As a result of the developmental coronary artery defect, chronic myocardial anoxia produces the pathological entity commonly referred to as congenital fibroelastosis. This condition is found in infants.

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Physiological Basis for Surgery

It has been demonstrated time and again (in the experimental laboratory and clinically) that once a heart becomes unstable, increased work load can easily produce ventricular fibrillation and death. An unstable heart is one in which there are areas (trigger zones) within the myocardium having a variation in the oxygen differential. The difference in myocardial oxygen saturation is the result of coronary artery disease on an acquired or congenital basis. By introducing outside sources of blood, an unstable heart may be rendered stable by improving the oxygen saturation of the entire myocardium and removing the trigger areas. These are now facts which have been time-tested in the experimental laboratory and clinically.

The Johnson Operation

The surgical procedure described as the Johnson Operation for improving the blood supply to the myocardium in the patient with acquired or congenital coronary artery insufficiency can be outlined in the following surgical steps:

1. The rich vascular pericardial and mediastinal fat pads are mobilized and developed into free pedicle grafts and in the infant the thymus is also used.
2. The pericardium is incised above the left phrenic nerve.
3. With the aid of a rasp, the inner surface of the entire left pericardium and the left epicardial surface of the heart is abraded.
4. Heart powder consisting of Isoniazid, Kieselguhr, and Asbestos powder in a mixture of equal parts is lightly sprinkled onto the left epicardial surface of the heart.
5. The free pedicle grafts are sutured in the region of the apex and below the anterior descending branch of the left coronary artery with 0000 atraumatic silk suture.
6. Pericardial windows measuring 1.5 cm in diameter are cut into the pericardium (approximately eight windows).
7. The pericardial incision is closed with interrupted 000 silk sutures.
8. Ligation of the left internal mammary artery at the third interspace.

9. Finally, the pericardial surface of the left lung is abraded with a dry sponge.

The surgical approach for this operation is through a left anterior submammary incision entering the pleural cavity through the fifth interspace. The operating time is approximately one hour.

This simple revascularization operation produces four outside sources of blood to a chronic anoxic myocardium. The new rich vascular channels to the myocardium develop from the free pedicle grafts; from the pericardium; from the increased backward flow through the internal mammary artery and its branches; and from the left lung. The vascular adhesions from the ligated left internal mammary artery and the left lung grow onto the heart surface through the pericardial windows. The heart powder consisting of Isoniazid, Kieselguhr and Asbestos acts as a chemical and mechanical irritant in the stimulation and formation of the vascular adhesions.

Selection of Patients for Operation

All patients with a known history of coronary artery disease and those with electrocardiographic evidence of coronary insufficiency should be given the benefit of surgical evaluation as potential candidates for the revascularization operation. Age is not a contraindication. The only contraindications are severe diffuse myocardial degeneration, recent myocardial infarction, and chronic pulmonary disease with low vital capacity. The risk of operation is less than 5 per cent.

TABLE I. STATISTICAL DATA ON TWENTY SURGICAL CASES

Number	Sex	Age	Type of Disease	Symptoms	Surgical Results	Months Post Surgical
1.	M	35 years	Acquired	A.P.	Excellent	11 months
2.	M	37 years	Acquired	A.P.	Excellent	18 months
3.	F	32 years	A*	A.P.†	Good	12 months
4.	M	40 years	Acquired	A.P.	Excellent	9 months
5.	M	34 years	A*	A.P.†	Good	14 months
6.	M	44 years	Acquired	EKG	Excellent	20 months
7.	M	41 years	Acquired	A.P.	Excellent	18 months
8.	M	48 years	Acquired	A.P.	Excellent	22 months
9.	M	47 years	Acquired	EKG	Excellent	16 months
10.	M	51 years	Acquired	A.P.	Excellent	15 months
11.	M	53 years	Acquired	A.P.	Excellent	14 months
12.	M	53 years	Acquired	A.D.	Fair	20 months
13.	F	55 years	Acquired	A.P.	Excellent	24 months
14.	M	58 years	Acquired	A.P.†	Good	19 months
15.	M	59 years	Acquired	A.P.†	Good	25 months
16.	M	62 years	Acquired	EKG	Excellent	21 months
17.	M	65 years	Acquired	EKG	Excellent	19 months
18.	M	67 years	Acquired	A.D.	Died	28 days
19.	M	4 months	Congenital	EKG	Excellent	8 months
20.	M	7 months	Congenital	EKG	Excellent	7 months

*Aortic valvular disease.
†Diffuse myocardial damage.
A.P. Angina pectoris with EKG findings.
EKG Positive Master's test, no pain.
A.D. Angina decubitus with EKG evidence of diffuse myocardial damage.

TABLE II. TABULATION OF SURGICAL RESULTS OF TWENTY CASES

Number of Cases	Type of Heart Disease	Surgical Results
12	Acquired	Excellent
4	Acquired	Good
1	Acquired	Fair
1	Acquired	Died
2	Congenital	Excellent

Over a period of two years, twenty patients were operated upon for coronary artery disease—eighteen adults with the acquired and two infants with the congenital types of coronary artery disease. The ages in the adult group ranged from thirty-two to sixty-seven years and in the infants from four to seven months. In the adult group there was one death and in the infant group none.

Clinical Results

A clinical evaluation of twenty patients (operated upon for coronary insufficiency) resulted in the following classification for the acquired group: twelve excellent, four good, one fair, and one died. The definition of excellent is freedom from pain, no required medication and no physical restrictions or limitation. Good results mean freedom from pain, enforced physical restrictions, that is, no hard labor or sports, and daily digitalis. The one patient classified as fair, was experiencing occasional pain with physical exertion, had enforced sedentary work and received daily digitalis.

In the congenital group there are two excellent results. Postoperatively there is a decrease

of heart size in these infants as determined by roentgenographs. Heart sounds are strong and of good quality (no longer distant and sluggish). The skin is warm, dry and of good color (no longer cold, clammy and gray). Their appetites improved greatly and they are now growing and happy babies.

Steroid Therapy

Physiopathological studies indicate that a large number of the patients with coronary artery disease also have adrenal insufficiency. Experimental[1,8] and clinical reports reveal beneficial results using cortisone and ACTH in acute and chronic myocardial states of anoxia. With this knowledge, the eighteen reported adult patients received steroid therapy pre- and postoperatively. These patients withstood the surgical procedure very well, recovered rapidly from the anesthetic, and their postoperative convalescence was smooth and uneventful except for one death.

Summary

An operation for improving the blood supply to the heart in patients with acquired and congenital coronary heart disease has been described and the clinical results tabulated. The author advocates the use of steroids pre- and postoperatively in these patients who have adrenal insufficiency to decrease the surgical mortality and morbidity.

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References

1. Johnson, A. S., Gerisch, R. A., Girton, F. W., Scheinberg, S. R., and Saltzstein, H. C.: Effect of cortisone on the size of experimentally produced myocardial infarcts (Further Studies). J. Michigan M. Soc., 52:1298 (Dec.) 1953.
2. Beck, C. S., and Leighninger, D. S.: Operations for coronary artery disease. J.A.M.A., 156:1226 (Nov. 27) 1954.
3. Thompson, S. A., and Raisbeck, M. J.: Cardiopericardiopexy. Ann. Int. Med., 16:495, 1942.
4. Vineberg, A., Munro, D. D., Chen, H., and Buller, W.: Four years' clinical experience with internal mammary artery implantation in the treatment of human coronary artery insufficiency including additional experimental studies. J. Thoracic Surg., 29:1-36 (Jan.) 1955.
5. Johnson, A. S.: Transplantation of the internal mammary artery in sixty experimental dogs for revascularization of the heart. Research completed 1951. Unpublished.
6. Johnson, A. S., Firnschild, P. G., and Fulton, H.: Visualization of coronary sinus graft and venous pathways of the heart in living dogs. Am. J. Roentgenol., 72:648 (Oct.) 1954.
7. Eckstein, R. W., and Leighninger, D. S.: Chronic effects of aorta coronary sinus anastomosis of Beck dogs. Circulation Res., 2:60, 1954.
8. Johnson, A. S., Scheinberg, S. R., Gerisch, R. A., and Saltzstein, H. C.: Effect of cortisone on the size of experimentally produced myocardial infarcts. Circulation, 7:224 (Feb.) 1953.
9. Johnson, A. S., Cremer, J., and Johnston, C. S.: Use of kieselguhr to stimulate the formation of vascular adhesions to the heart in the experimental dog. Unpublished.
10. Johnson, A. S.: Revascularization operations for coronary artery disease. Harper Hospital Bulletin, 14:91, March-April, 1956.

CAN WE RELY ON MODERN MEDICINES?

(Continued from Page 383)

Consequently the establishment of certification procedures which might assure the public that a given additive is harmless is a most difficult matter, which has been the subject of considerable discussion and controversy. Nevertheless, additives are in use, and the problem of making a reasonable determination of their safety needs to be faced."

A second problem that deserves careful attention is the manner whereby the public is made aware of new discoveries. As the pace of development has quickened, the speed with which new drugs are promoted both to doctors and to laymen has increased until today a physician may be asked about a new drug by his patients almost before he himself has had an opportunity to learn about the benefits and the contraindications of the product. This understandably has brought about a demand for increased cooperation between pharmaceutical manufacturers and physicians. It is interesting to note that this demand is not confined to the United States. A recent release indicates that essentially the same problem is bothering the medical profession in England.



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1. Nichols, R. L. and Finland, M.: *J. Clin. Med.* 49:410, 1957.

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Chronic Adrenal Insufficiency

A Diagnostic Dilemma

By R. E. Anderson, M.D., and
R. J. Bareis, M.D.
Flint, Michigan

CHRONIC ADRENAL INSUFFICIENCY is considered a relatively rare condition. Cecil,[1] for instance, states that the frequency of the primary form of the disease is approximately one case per 100,000 population. It has been our impression that this disease may actually occur more frequently but that the diagnosis may be obscured by the vagueness of the symptoms and by the difficulty of establishing the diagnosis. During the past two years we have observed four substantiated cases of adrenal insufficiency which illustrate some of the problems and obscurity associated with its diagnosis.

Case Reports

Case 1.—H. R., a forty-six-year-old white woman store manager, separated from her husband, was admitted to Hurley Hospital on April 23, 1957, with complaints of profound weakness, anorexia, nausea, vomiting and a weight loss of ten pounds which had been present for three months. Her symptoms had become progressively more severe. She had become more nervous, was irritable, complained of inability to concentrate, and had noted a memory loss. Always known as a shrewd business woman, she had lost a large sum of money in business ventures just prior to her admission here. She noted a recent craving for large quantities of salt.

Systemic review revealed the onset of vitiligo in 1945. Beginning on the upper extremities, it now involved her entire trunk. This spreading was accompanied by hyperpigmentation of the non-vitiliginous areas. Menstrual periods were scanty but otherwise normal. She denied chills, fever, night sweats or other symptoms.

Past history revealed a bilateral bunionectomy in July, 1954, without post-operative complications. Although otherwise asymptomatic, it is interesting that her white cell count was 10,000 with a differential of 46 per cent neutrophils, 49 per cent lymphocytes and 5 per cent eosinophiles. In November, 1955, she was again admitted to Hurley Hospital with complaints of anorexia, occasional nausea and vomiting, right upper quadrant abdominal pain, and diarrhea. Complete work-up at that time, including a barium enema, upper gastrointestinal series, gall bladder and chest x-rays were all within normal limits. Liver function tests and fasting blood sugar were also normal. The white cell count was 9,000 with a differential of 29 per cent neutrophils, 60 per cent lymphocytes, 7 per cent monocytes and 4 per cent eosinophiles. She was discharged with the clinical diagnosis of psychogenic gastrointestinal dysfunction and vitamins were prescribed. She felt well and remained so until the present illness. During the three months prior to admission, she consulted several physicians, all of whom felt her difficulties were on an emotional basis. She denied previous serious personal or familial disease.

Physical examination showed a blood pressure of 100/70 reclining, pulse of 80, and respiratory rate of 18. She was an asthenic, thin woman weighing 100 pounds, who was lethargic, apathetic, and reluctant to speak. Vitiligo covered her entire body but was more prominent on her trunk where the surrounding areas were definitely hyperpigmented. No mucosal, joint surface, or nipple hyperpigmentation was noted. She was moderately dehydrated and reflexes were generally but equally diminished. Lymphadenopathy was not present and the rest of the examination gave findings within normal limits.

Laboratory examinations showed an admission white count of 10,000 with 41 per cent neutrophiles, 46 per cent lymphocytes, 6 per cent eosiniphils, 5 per cent monocytes and 2 per cent basophiles. At the time of discharge she had 7,000 white blood cells with 77 per cent neutrophiles and 23 per cent lymphocytes. Hemoglobin was 14 mg.; erythrocytes were 4 million/cu. mm.; and urinalysis was within normal limits with a specific gravity of 1.023. Serology, serum albumin and bromsulphthalein tests were normal. The total eosinophil count was 275 and after 25 mgm. of ACTH, intravenously, over an eight-hour period, the count was 187 cells. A control urinary 17-ketosteroid determination was 3.9 mgm. for twenty-four hours, and after ACTH stimulation, it was 3.7 mgm. for twenty-four hours. Admission electrolytes revealed a sodium of 105 meq./liter; chlorides of 81.2 meq./L.; potassium of 8.6 meq./L., CO_2 combining power of 15 meq./L., and a blood urea nitrogen of 28.4 mgm. per cent.* Spinal fluid examination and skull x-rays were normal. Basal Metabolic Rate was plus seven and PPD #1 and #2 (tuberculin) were negative in forty-eight hours. A chest film revealed a small cardiac silhouette, consistent with the diagnosis of Addison's disease. (See Fig. 1-A)

Early in her clinical course, the diagnosis of adrenal insufficiency was considered but it was felt more probably

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*Normal values in our laboratory: Sodium 137-147 meq./L., potassium 4.1-5.6 meq./L., chloride 98-106 meq./L., CO_2 combining power 24-31.5 meq./L., and blood urea nitrogen 10-15 mgm. per cent.

that her symptoms represented a psychophysiological reaction, precipitated by recent financial losses. A work-up, however, was felt indicated. During the course of the eight-hour intravenous ACTH test, she became restless, complained of paralysis of her extremities and had a feeling of impending doom. Physical examination at that time was essentially unchanged. She was reassured and given Seconal (3 grains IM) and later in the same evening this medication was repeated. At 8:00 a.m. she was very much worse. She was very lethargic, could not move any of her extremities, spoke only in gasps with a faint whisper. B. P. was 100/70 reclining; pulse was 80. Deep tendon reflexes were unobtainable. A spinal tap was done and intravenous saline was started. One hour later she was found in profound shock with a blood pressure of 60/0, but with a surprisingly slow pulse of 80. She perspired profusely, was cool and clammy, and had shallow rapid respirations. Intravenous hydrocortisone and saline were given rapidly. Within an hour her blood pressure had returned to normal limits and within twenty-four hours she was eating well and up walking about. During this time she received 400 mgm. of hydrocortsone and 6 liters of fluid. Her steroids were tapered during the next two-week period, so when discharged on May 10, 1957, she was receiving hydrocortisone, 10 mgm., b.i.d. and 0.1 mgm. of 9-alpha-flourohydrocortisone. She was completely asymptomatic, had normal electrolyte values, and had gained eight pounds.

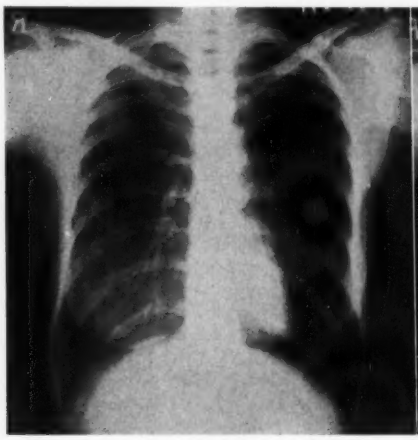


Fig. 1. (A) Small cardiac silhouette revealed by chest x-ray and consistent with the diagnosis of Addison's disease (*Case 1*—H.R.).



Fig. 1. (B) Small cardiac shadow (*Case 2*—R.P.).

Comment.—In retrospect, this patient very typically illustrates chronic adrenal insufficiency terminating in adrenal crisis. It is not unusual for these patients to be diagnosed as having emotional or psychophysiological disease. Certainly complaints of weakness, irritability, fatigue, anorexia and emotional lability can be attributed to neurasthenia. Vitiligo is also not uncommon in Addison's disease, occuring in some 15 to 20 per cent of cases.[2] In this case, it was the most important initial finding that alerted the physician to the possibility of organic disease. Electrolyte and steroid values obtained here are almost diagnostic for the disease. If the results of these determinations had been more readily available, therapy would have been instituted more promptly and adrenal crisis avoided. In view of the hyperkalemia present, an electrocardiograph at the time of adrenal crisis would have been informative. The giving of large doses of Seconal probably was a prominent factor in precipitating the crisis. Sedatives and hypnotics are poorly tolerated by the Addisonian patient. We have no etiological explanation for adrenal insufficiency in this case.

Case 2.—R. P., a fifty-two-year-old married woman, secretary, was admitted to Hurley Hospital on May 23, 1957, with the chief complaints of increasing nervousness, irritability, and fatigue during the preceding six months. During the last month she had also developed symptoms of anorexia, nausea, and occasional vomiting which were not related to any specific food ingestion. These symptoms were more severe in the early morning hours. A weight loss was estimated to be twenty pounds during the six-month period. Dizziness was the most recent complaint, occuring after standing or changing position suddenly. A sister had noticed a deepening of her skin color although the patient was not aware of this change. Systemic review was unremarkable. Menses had ceased one year previously, but had been normal until that time. She had consulted two other physicians prior to her admission who attributed her

symptoms to nerves and prescribed vitamins and tranquilizers.

Past history was not remarkable. She had been in good health except for single episodes of pneumonia and pyelitis. She denied operations and history of allergic or serious disease. She had been exposed to a brother who had died of tuberculosis twelve years before. She had spent her entire lifetime in Michigan.

Physical examination on admission revealed a well developed, thin, acutely ill, irritable woman complaining of weakness and nausea. Blood pressure reclining was 110/70; standing was 80/60 and was accompanied by lightheadedness. Pulse was 90 and regular; temperature was 99 degrees. There was generalized increased brownish pigmentation, especially over neck, shoulders and left elbow. There were no mucosal hyperpigmentation, lymphadenopathy or chest findings. The remainder of her examination was within normal limits.

Laboratory tests included an admission hemoglobin of 16 grams, hematocrit of 50, leukocyte count of 8,600 with a deferential of 27 per cent neutrophils, 58 per cent lymphocytes, 5 per cent eosinophils, and 10 per cent monocytes. Sedimentation rate was 19 mm./hour, corrected. Urinalysis, serology, bilirubin, and bromsulphthalein tests were normal. Total eosinophil counts were 264 and 250, and after 25 mgm. of ACTH intravenously over an eight-hour period, 155. An intravenous glucose tolerance test was normal with a fasting value of 91 mgm. per cent (normal is 80-120 mgm. per cent). A blood urea nitrogen was 28 mgm. per cent, CO^2 combining power 24 meq./L., sodium 141 meq./L., potassium 6.1 meq./L., and chlorides 110 meq./L. BMR was minus 15. Unfortunately control urinary 17-ketosteroid and 17-ketogenic steroid determinations were misplaced; however, a twenty-four-hour sample taken following an intravenous ACTH test showed 17-ketosteroids of 5.5 mgm. and 17-ketogenic steroids of 7.3 mgm. (normal values without ACTH stimulation are 10 plus or minus 5 mgms.).[3] X-rays of the chest showed fibrocalcific changes in both upper lung fields thought to be compatible with either tuberculosis or histoplasmosis with activity undetermined. The heart shadow was small and consistent with that seen in Addison's disease (See Fig. 1-B). Abdominal x-ray did not reveal adrenal calcifications. Purified protein derivative #1 and #2 were negative after forty-eight hours while a histoplasmin skin test was strongly positive. Sputum and gastric washings were negative for tubercle bacilli.

Clinical Course: On admission, the patient was treated with intravenous fluids including saline and greatly improved after three days. A careful review of her symptoms, the finding of a relative lymphocytosis, hyperpigmentation, and small cardiac shadow on x-ray raised the possibility of chronic adrenal insufficiency. Water tests to determine her ability to diurese were attempted on two occasions but she was unable to tolerate the large volume of water. After salt had been restricted and fluids forced over a forty-eight-hour period in preparation for a Cutler, Power and Wilder test for Addison's disease, the patient became nauseated, vomited repeatedly, and felt very weak to the point of not being able to sit up. Blood pressure reclining was 80/60; sitting was unobtainable and was associated with severe dizziness which was intolerable. Blood studies showed a glucose of 79 mgm. per cent, sodium of 132 meq./L., and potassium of 6.0 meq./L. She was started on IM and IV hydrocortisone, IV saline, and IM DOCA in 5 mgm. daily doses. Improvement was dramatic. The DOCA was stopped after two days and hydrocortisone was reduced to a maintenance dose of 10 mgm. b.i.d. during the next week. During this time she gained six pounds, regained her appetite, and felt perfectly well.

Comment.—Once again, many of this patient's complaints could be attributed to a chronic tensional state. However, these symptoms in association with hyperpigmentation, low blood pressure and postural hypotension would give one a high index of suspicion that chronic adrenal disease is present. Some of the laboratory tests are equivocal, but in association with the clinical picture the diagnosis seems irrefutable. This patient presented a diffuse type of pigmentation occasionally seem in Addison's disease. It is interesting to speculate about the part that a past histoplasmosis infection might have played as the etiological agent here.

Case 3.—S. N., a fifty-seven-year-old white man, factory worker, was admitted to the hospital in June, 1955, with a two-week history of intermittent anorexia, nausea, vomiting and burning left anterior and substernal chest pain. He had been maintained at bed rest because of weakness and had lost 20 pounds of weight in the two-week period. He had been seen by another physician some ten days before who prescribed penicillin without relief. He denied dizziness, any change in his skin color, or other symptoms. There had been no previous serious illnesses or hospitalizations or known exposure to tuberculosis.

On admission to the hospital his blood pressure was 94/50 reclining, pulse 80, respirations 20, temperature 99 degrees. He was obviously acutely ill, dehydrated, lethargic and somewhat disoriented. There were small areas of tan pigmentation on the buccal mucous membranes, over his elbows, knucles, and legs. Heart and lungs were not remarkable except for some emphysematous changes. The remainder of his physical exam was normal.

Laboratory findings on admission revealed a hemoglobin of 16.7 gm., white blood count of 3,800 with a differential of 61 per cent neutrophils, 36 per cent lymphocytes, 1 per cent monocytes and 2 per cent eosinophiles The urinalysis was normal. The hematocrit was 49 per cent; the sedimentation rate was 44 mm./hour corrected. Serum sodium was 117 meq./liter, serum potassium 7.1 meq./L., chlorides 75.7 meq./L., blood urea nitrogen 63 mgm. per cent. An oral glucose tolerance test revealed a curve of 94 mgm. per cent fasting and subsequent hourly values of 110, 94, 70, 101 and 82, mgm. per cent. Electrocardiogram revealed a pattern

compatible with electrolyte disturbance, probably hyperkalemia. A tuberculin test was strongly positive. An upper gastrointestinal series revealed grossly abnormal small bowel pattern and motility of undetermined etiology. There were irregular calcifications in relation to the right lateral margin of the 12th dorsal vertebral body possibly due to calcifications within the right adrenal gland. A chest x-ray revealed a small cardiac silhouette which was compatible with the diagnosis of Addison's disease. There was a bilateral upper lobe infiltrate thought to represent tuberculosis of undetermined activity.

Clinical Course.—On admission, diagnoses of myocardial infarction, peptic ulcer, pancreatitis, renal disease with uremia, and neoplasm were considered. Symptomatic therapy with intravenous fluids, thorazine, antacids and sedatives was without effect. Two days after admission, the correct diagnosis was suspected for the first time and the patient was started on desoxycorticosterone acetate, hydrocortisone and sodium chlorids. Even though attempts to prove active tuberculosis were unsuccessful, in view of the x-ray findings, anti-tuberculous drugs were also started. Improvement was dramatic and at the time of discharge on July 7, 1955, the patient was asymptomatic. His blood pressure was 120/80 reclining and his electrolytes were normal. Subsequent chest films showed no change in the described infiltrates. Sputum and gastric washing cultures were negative for tubercle bacilli.

The patient was again seen in Hurley Hospital in March, 1957, with the diagnosis of thrombophlebitis. At that time, his blood pressure and electrolytes were again within normal limits and he had no symptoms referable to adrenal insufficiency. He had been maintained on small doses of hydrocortisone and 9-alpha-flourohydrocortisone.

Comment.—Mr. S. N. represents a case of chronic adrenal insufficiency presenting with a picture compatible with gastrointestinal or cardiovascular disease and detected only by a high index of suspicion and adequate work-up. This case, more so than the others, typifies the classical pigmentary changes described by Addison. The chest x-ray findings and positive tuberculin test strongly suggest tuberculosis as the etiological agent.

Case 4.—L. A., a thirty-two-year-old male factory worker, was well until the day prior to his admission in December, 1956, when he developed chills, fever, generalized myalgias, and severe sudden frontal headache which was bilateral and throbbing in character. The headache was not relieved by simple medications and injections given by the family doctor. Later in the day, the patient developed anorexia, nausea, vomiting, and experienced continuous slight dizziness and unsteadiness of gait. He had had no previous similar episodes. No weight loss or pigmentary changes had been noted. He had previously been studied for infertility and had some slight questionable impotence and loss of libido the year prior to admission. There was no significant past history or familial disease.

On admission, his blood pressure was 100/78 reclining, temperature 100.8 degrees, and pulse 100. He was somewhat sluggish and obtundent and was lying quietly in bed complaining of extreme weakness and persistent headache. There was generalized depigmentation and pallor of the skin and mucous membranes. The nipples were light in color. The heart was normal in size. Hair growth was adequate and neurological examination was intact. The heart was normal in function. There was slight testicular atrophy and phallus was slightly decreased in size. Visual fields were normal.

On the basis of continued persistent headache, an x-ray of the skull was taken and revealed an enlargement of the sella turcica. Investigating this finding, the following laboratory studies were obtained. Spinal fluid dynamics and exam were normal. A BMR was minus 28 and repeated was minus 35. Serum cholesterol was 167 mgm. per cent. An oral glucose tolerance test revealed a flat curve with values of fasting 94 mgm. per cent and subsequent half hour values of 132, 43, 71, 59, 67, 65, and 71 mgm. per cent. Serology, urinalysis, and hemoglobin were not remarkable. White blood count was 7150 with 52 per cent neutrophiles, 37 per cent lymphocytes, and 11 per cent monocytes. Sperm count was 93,000,000 cells/cubic centimeters. Urinary 17-ketosteroid determinations on two occasions were 2.1 mgm. per cent and 3.1 mgm. per cent per twenty-four hours. Protein-bound iodine was 4.9 units. A quantitative follicle-stimulating hormone test was negative at 6 mouse units.* After 25 units of I. V. ACTH, the eosinophile count dropped from a pre-test level of 122 cells to 77 cells. Serum sodium and potassium were normal but serum phosphorus was elevated to 3.6 mgm. per cent. Cerebral arteriograms were not helpful.

Clinical Course.—On admission to the hospital, the patient was treated symptomatically with analgesics and intravenous glucose. His fever and headache subsided within forty-eight hours, but intermittent episodes of weakness and dizziness persisted. An attempted arteriogram was discontinued because of severe dizziness and hypotension of 70/40 reclining. Intravenous saline was added to the therapeutic program and the patient's strength gradually increased. The diagnosis of panhypopituitarism secondary to an expanding lesion of the pituitary gland was made and therapy advised. The patient was subsequently hospitalized at University Hospital in Ann Arbor, where the diagnosis was confirmed and cobalt therapy to the pituitary gland was carried out. The patient is now maintained in good health on maintenance therapy with thyroid, hydrocortisone and testosterone.

Comment.—Mr. L. A. represents a case of occult adrenal insufficiency secondary to failure of stimulation of the adrenal glands by the pituitary. The patient entered the hospital with a picture compatible with a viral infection and was then

*Normal Value—positive at 6 mouse units, negative at 48 mouse units.

fortuitously discovered to have adrenal insufficiency. This patient illustrates one of the pigmentary changes seen in adrenal insufficiency, but in this case depigmentation is the predominent finding due to failure of stimulation by melanocyte-stimulating hormone which is also decreased in pituitary hypofunction.[5] Decreased pigmentation, particularly of the nipples and genital areas, is a clue in the differentiation of primary and secondary adrenal insufficiency. Despite the vagueness of his symptomatology on admission, complete endocrine work-up on the basis of the suggestive findings yielded gratifying results and spared the patient a prolonged and protracted course of illness.

Discussion

Symptoms of adrenal insufficiency often mimic organic disease of specific organ systems as well as psychophysiologic disturbances. A careful history and physical examination is mandatory if this disease is to be recognized. Unfortunately, no single symptom, physical finding, or laboratory test is diagnostic. The diagnosis can be established only by correlating the composite clinical picture with the appropriate laboratory studies. As in the diagnosis of any relatively rare disease, a high index of suspicion is required. Cases 1 and 2 were seen by competent physicians over a period of several months with diagnoses of psychophysiologic disturbances. Case 3 presented a picture compatible with multiple diagnostic possibilities. A diagnosis of influenza seemed adequate to explain the clinical picture in Case 4. In no case was adrenal insufficiency suspected on admission to the hospital.

Even though one desires preliminary laboratory studies before instituting specific therapy, it is occasionally necessary to treat the patient on an empirical basis in order to prevent the possible mortality associated with severe adrenal crisis. Our hesitancy to do so in Case 1 almost led to a fatality. On the other hand, the diagnosis should not be made indiscriminately because doing so may commit the patient to lifelong therapy.

The four cases described here illustrate four distinct types of pigmentary change. Case 1 represents vitiliginous change seen in 15 to 20 per cent of cases of Addison's disease. Diffuse tanning of the skin characterized Case 2 while Case 3 demonstrated the classic spotty pigmentation, particularly of the buccal mucosa. The secondary type of adrenal insufficiency with hypopigmentation is illustrated by Case 4. There has been no adequate explanation for the differences in distribution of pigmentation in primary adrenal insufficiency.

In earlier reports, tuberculosis was most frequently incriminated as the cause of Addison's disease. Today it probably accounts for less than 50 per cent of cases.[1] Many of the remaining cases are idiopathic with a small number being caused by histoplasmosis, amyloidosis, and tumor metastases. The possibility of histoplasmosis as the etiology of Case 2 and tuberculosis of Case 3 seems entirely plausible.

Summary

1. Four cases of adrenal insufficiency are presented, three of the primary variety and one secondary to pituitary tumor. The fact that these cases were newly diagnosed in a general hospital over a two-year period would indicate that the disease is not as rare as previously reported.

2. Confusion with other diseases or neurotic behavior is often the cause of delay in establishing the diagnosis.

3. The diversity of forms of pigmentary changes seen in the four cases is discussed.

4. Etiologic relationships are suggested in three of the cases presented—one of tuberculosis, one of histoplasmosis, and one secondary to pituitary tumor.

5. A high index of suspicion is required if chronic adrenal insufficiency is to be diagnosed.

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References

1. Cecil, R. L.: A Textbook of Medicine. (9th ed.) Philadelphia: W. B. Saunders, 1956.
2. Williams, R. H.: A Textbook of Endocrinology. (2d ed.) Philadelphia: W. B. Saunders, 1955.
3. Norymberski, J. K., West, H. F., and Stubbs, R. D.: Assessment of adrenocortical activity by assay of 17-ketogenic steroids in urine. Lancet, 1:1276, (June 27) 1953.
4. Hepler, O. E.: Manual of Clinical Laboratory Methods (4th ed.) p. 300. Springfield, Illinois: Chas. C Thomas, 1949.
5. Lerner, A. B., Shizume, K., and Bunding, I.: The mechanism of endocrine control of melanin pigmentation. J. Clin. Endocrinol., 14:1463 (Dec.) 1954.

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Small Plant Medical Care

By Thornton I. Boileau, M.D.
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TODAY'S small plant operations have become an integral part of the life and livelihood of every community. The impact of such operations is not only upon the individual worker but reaches out to affect the health, economy and future of the neighborhood. Small plants are manpowered by the "man next door," by "his oldest boy, John," by a fellow migrant "from back on the farm," all settled into a fairly well-defined area.

Their problems follow a similar pattern, depending upon heredity, background and personal skills, but all are profoundly affected by the practices and policies of their employer. This influence, whether it be good or bad, affects to some extent every man, woman or child. The modern industrialist recognizes his obligation to his neighbors and realizes that their health and prosperity is basic and inseparable from the welfare of industry as a whole.

Responsibilities

The mutual responsibilities of medicine and industry cannot be discharged with profound pronouncements and group singing by physicians and industrialists. They demand the practical application of medical advances and improved manufacturing methods on the job.

The physician must be trained to do more than treat the trauma and acute problems of industry. He must be ready to carry preventive medicine to a point where a steady, healthy management and working force can be maintained. Health conservation can easily prolong the productive and effective years of man with his acquired skills. The small plant owner or manager is forced to deal in competitive realities. He is not in the medical business but a manufacturer of goods. The modern executive realizes the need for medical assistance and is willing to invest in it if he can be shown some tangible return for his investment. Unless he can be competitive, the operation ceases to exist and with it many jobs.

Presented at the 92nd Annual Session of the Michigan Medical Society, Grand Rapids, September, 1957.

Challenge to Advance

Organized medicine is now challenged to carry to the small plant the concepts of occupational medicine developed through the initiative of larger corporations in recent years. It is applied preventive medicine at its best that when integrated with other medical facilities, will have far-reaching benefit for the whole community.

The physician interested in the field of occupational medicine, now officially recognized as a specialty, will find ample opportunity available in the care of small plants. This is not for the man who has taken a long look at the broad field of medicine, felt his knees weaken, and then chosen some small segment in which he hopes to become proficient. Rather, here is needed the physician willing to add unto his store of general medical knowledge, the skills acquired by direct contact with the problems of his laboring fellowman. He must have patience—patience to treat the man himself, not just the injury; patience to listen, patience to observe and patience to understand.

The Survey

The initial move of the industrial physician who has been asked to accept responsibility for medical care in small industry is to make a careful survey of the operation. This should include the following:

1. The geographic location as related to the work force and available transportation.
2. The physical characteristics of the plant itself as regards construction, lighting, ventilation and heating.
3. The manufacturing process, the machinery involved, raw material and actual production.
4. Tabulation of chemicals, solvents or toxic substances in common use and their identification.
5. The physical and mental requirements of each job classification.
6. Installations for dust, fume, and noise controls.
7. Methods of material handling, whether manual or mechanical, and weights involved.

8. Sanitation of the plant and water supply.

9. Provisions for first aid and the handling of medical emergencies.

10. A record of absenteeism due to both injury and illness.

The Program

With the plant survey as a general guide, the physician may now institute constructive medical controls. The medical supervision and time required can be regulated whether the employes be ten in number or 500. The second step is now to set up a pattern of progress.

1. Determine how much time is to be allotted to the particular plant depending upon the number of employes, type of manufacture and medical facility. It may be two hours each morning for a plant of five hundred or a brief visit once a week to a small shop employing fifty men.

2. Make recommendations regarding the employment of an industrial nurse on a full or part-time basis if indicated. Also, arrange training of selected employes in first aid and emergency care.

3. Set up and supply an adequate but not extravagant first aid. This may be a well-stocked chest in the supervisor's office or a separate area with modern medical equipment.

4. Provide the plant manager and any medical personnel with a clear set of standing orders for the handling of emergency and routine medical cases.

5. Pre-employment physical examinations are a necessity if the selection of personnel is to be related to the job demands of the particular plant. The man must be identified with the requirements of the job from the standpoint of stability, adjustment and physical aptitude to attain effectiveness for the employer and steady employment for the employe.

6. A periodic tour of the plant with the manager to survey possible hazards and make recommendations for correction on a practical basis.

7. Review the ratio and causes of absenteeism at least every three months and institute preventive measures. On this score, you may expect full co-operation from every plant manager. Someone is needed to man every job, especially in a small plant where the owner is often one of the workers.

8. Consultants must be recommended, where indicated, in the fields of toxicology, occupational disease, or trauma, and the employer guided in their selection. They may be drawn from either state or private agencies.

9. Encouragement of the employe in good health practices by constructive periodic examinations. He is to be encouraged to consult his family physician not only for treatment of the acute illness but for long-range preventive measures.

10. As counselor, the industrial physician will be called upon to answer many questions and often arbitrate differences of opinion. In all of these things, the dignity of the individual comes first. The prestige and influence of your office depends upon fairness.

The industrial physician will find it practical to divide his time between a number of small plants in a given geographic area. With diligent supervision and planned care of each, many small plants may be well served. The good that will come by carrying the philosophy of preventive medicine to the people in their work-place will be great. It will give a ringing answer to the present demand for extended application of medical advancement. And, for the physician himself, the personal satisfaction of needed work well done, will make him akin to all he serves. Medicine is an Art, beloved by all men, but nowhere is its practice more rewarding than in the little world of the small plant.

DIMINISHING RETURNS

Between 1950 and 1953, personal income rose 26 per cent; the number of tax returns was up 41 per cent; gross income reported on the returns was up 33 per cent, and tax liability was up 60 per cent. However, the number of returns with gross incomes of $100,000 was down 23 per cent. Total income reported on these returns was down 28 per cent and total tax liability for these returns was down 24 per cent.

During the year 1952-1953, personal income was up 5 per cent, the number of tax returns rose 3 per cent, and gross income reported on these returns was up 7 per cent. The total tax liability was up 6 per cent.

Four years ago this state of diminishing returns was reached by almost a quarter of a million taxpayers, affected over one-sixth of all taxes collected, and is each year reaching a lower level of income.—*Economic Intelligence*, U. S. Chamber of Commerce.

Outposts of Medical Research

By John D. Porterfield, M.D.
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IT IS commonly said that discoveries in the medical sciences are being incorporated into medical practice more rapidly nowadays than in any prior era since medicine became a learned profession; and it is customary to express keen gratification that such is the case.

Undoubtedly, the means for the rapid dissemination of knowledge have greatly increased in the modern period. Also, technologic advances in medicine during the past twenty years have been nothing short of breathtaking.

We have just had striking evidence of these developments in the preparations for combating Asian influenza in this country. News of the epidemic in Hong Kong about the middle of April was flashed to health authorities throughout the world in a matter of minutes. By May 13, United States Army virologists had isolated the new virus, an immunologically distinct variant of influenza virus A. Planes flew a sample of the new virus to this country in a few hours. By early June, scientists of the Walter Reed Army Institute of Research had propagated the Asian influenza virus for distribution to pharmaceutical manufacturers. By July 5, U. S. Public Health Service laboratories had tested a successful monovalent vaccine. On August 12, manufacturers released the first million and a half cc. of Asian influenza vaccine to military and civilian physicians. Between the outbreak in Hong Kong and the introduction of a new immunizing agent into medical practice, four months had elapsed. Each step depended on modern means of communication and transportation, and on medical facilities and skills unknown twenty years ago—many unknown ten years ago.

Contrast this with the introduction of smallpox vaccination into this country. Edward Jenner published his "Inquiry into the Causes of the Variolae Vaccinae or Cowpox" in 1796. The news reached American shores, under sail, nearly three years later when early in 1799, Benjamin Waterhouse received a copy of the paper from an English colleague. Another eighteen months elapsed before Waterhouse could send for and receive some of the cowpox matter with which to test the worth of Jenner's discovery. Even when he had done this and published his findings in December 1800, he alone had the means to propagate the virus but no one had the means to produce and distribute it in volume.

Despite such evidence that modern medicine is better equipped to eliminate the lag between scientific findings and practical application, there is still a considerable distance between the outposts of medical research and the office of the practicing physician. Let us examine the grounds for this statement and explore some possibilities for narrowing the gaps.

Science or Technique?

Generally speaking, we can distinguish two major contributions of research to medical practice—knowledge of biological processes and technical equipment for dealing with pathologic conditions. To a greater or less extent, both science and technique are involved in every scientific observation; but the proportion of each in medical research varies not only from subject to subject, but also from one period of time to another. The impact of new knowledge or new technique on practice also varies, not only according to the speed and efficiency of communications between investigators and practitioners, but also in proportion to the physician's interest in basic understanding or in immediately applicable techniques for dealing with disease.

Thus, variations in the content and emphasis of medical research, in the quality of communications, and in the receptiveness of physicians may be determining factors in the relative speed with which some medical discoveries are absorbed into practice while others remain generally unknown or little applied.

It would appear that medicine at present is in a period when investigators and practicing physicians are of one mind in the search for greater

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technical efficiency in the treatment of disease. The past decade has produced antibiotics, steroids, agents for the treatment of hypertension, surgical and anesthetic techniques—all unheard of when the majority of practicing physicians were in medical school. Even in cancer and certain mental illnesses, chemotherapy now offers hope of better clinical control.

It is not surprising that practicing physicians have been eager receptors of such contributions. In many instances, the new procedures and agents have given physicians their first opportunity to afford swift relief from suffering or to prevent deaths due to conditions long unresponsive to available therapies.

But emphasis on "practical results" tends to push into the background of medical practice the many substantial advances of the past decade in fundamental and clinical knowledge. In these contributions, science presents the greatest intellectual challenges to the practicing physician; but here the distance is greatest between the outposts of medical research and the practitioner's office.

The critical factor in this lag is the tremendous scope and complexity of contemporary medical science. Where physicians have been accustomed to dealing with clinical manifestations, morphological changes and physiological disturbances, science now turns our attention to molecular and sub-molecular structures and their amazingly complex functions. From this vantage point, a new view of the human organism is emerging which changes fundamentally our traditional concepts of pathogenesis.

This is especially true, for example, in disturbances of metabolism. Within this broad field of medicine, a unifying influence has been operating with increasing force during the past decade —namely, the partnership of genetics and biochemistry. While independent studies in both fields continue to broaden the areas of basic knowledge, the joint approach has been extraordinarily fruitful in sharply defining specific clinical problems and, in some instances, establishing leads to effective prophylactic and curative therapy. No physician, be he a general practitioner or a specialist, can function efficiently today without a good understanding of the biochemistry of inheritance.

Six years ago, Dr. George W. Beadle, as guest lecturer at the National Institutes of Health, discussed the advances in this field to which he and his associates at the California Institute of Technology had made—and continue to make. These are outstanding contributions.[1] In presenting the evidence then available on the genetics of metabolism, Dr. Beadle described the intimate relationship between a specific gene and a specific enzyme in the process of catalyzing a specific biochemical reaction. At that time, this one-gene one-enzyme hypothesis had had some application in laboratory and clinical studies of various obscure methabolic diseases and blood dyscrasias. But the specific biochemical defects had not been thoroughly clarified nor was there direct evidence of milder clinical forms of such hereditary deficiency diseases, nor of possible relationships between such disorders and other diseases. In the brief period since 1951, progress along each of these lines has been striking. To illustrate, I should like to cite two recent integrated studies at the Public Health Service's National Institutes of Health.

Galactosemia has long been recognized as an hereditary inability to metabolize a specific component of milk sugar, galactose. The early manifestations are observable shortly after birth, but it has been extremely difficult to differentiate the basis of such symptoms as diarrhea, jaundice, and enlargement of the liver in infants. Deaths, therefore, have been common in early infancy and children who have survived have been affected by metabolic illnesses and mental retardation.

Within the past two years, Dr. Herman Kalckar (pronounced Kal-kar) and his associates at NIH have demonstrated the specific biochemical defect in galactosemia.[2] It is a genetically-directed deficiency in the enzyme, galactose transferase, which catalyzes the conversion of galactose phosphate to glucose phosphate in the red blood cells and the liver. On the basis of this finding, the same research workers have developed a safe and relatively simple diagnostic test for galactosemia, applicable in infants and older children. It is now possible to establish a definitive diagnosis of the disease in earliest infancy, and hence to prevent its devastating effects through galactose-free diets. There is good reason to believe that untold numbers of cases have been unrecognized in the past.

Another finding in this series of investigations is of interest. It was demonstrated that the parents of children with galactosemia have some difficulty in metabolizing galactose, although they have only one abnormal gene while the affected offspring in-

herit two—one from each parent. This enhances the physician's opportunity to discover carriers of the trait, and to use this information in counseling clients.

Within the past two months, Drs. LaDu, Seegmiller, Laster, and McGuire at NIH have demonstrated, for the first time, the specific enzymatic deficiency in alcaptonuria, another hereditary metabolic disturbance.[8] The "black urine" characteristic of the disease appears in early infancy, usually first observed when the infant's diapers turn brown after washing and drying in the sun. This symptom causes no discomfort and does not appear to be associated with other disorders in early life. In later life, however, serious complications may develop including a progressive, deforming arthritis resulting from damaged cartilage (ochronosis).

The importance of new knowledge of alcaptonuria rests on the possibility that the disscovery and elucidation of a causal relationship between the joint manifestations and the accompanying metabolic defect may provide better understanding of the pathogenesis of apparently unrelated forms of arthritis. Moreover, clarification of such clinical and biochemical relationships may lead to rational programs of early diagnosis and preventive therapy.

The biochemical defect in alcaptonuria has long been recognized as a failure to oxidize homogentisic acid, an intermediate compound in the metabolism of the aromatic amino acids, phenylalanine and tyrosine. Phenylalanine is converted into tyrosine and the latter then undergoes numerous oxidative changes. Athwart this path of tyrosine stands homogentisic acid which normally is fully metabolized at this point to clear the track. In alcaptonuric patients, this reaction is blocked or impaired. What is missing is the genetically-directed enzyme that catalyzes the breaking of the homogentisic acid ring.

The NIH investigators have identified this missing link as homogentisic acid oxidase and have demonstrated its absence in the liver of an adult patient with alcaptonuria and associated ochronosis.

What is the significance of such a demonstration to the practicing physician? It offers no new drug for the treatment of alcaptonuria. It adds nothing to laboratory diagnostic techniques already available. According to the investigators themselves, it probably raises more questions than it has answered. But it does challenge the physician's thought, as have other demonstrations in the field of biochemical genetics, and it cannot fail to affect his recognition of the vague early symptoms of this and many related disorders. Diagnosis, therapy, and prognosis depend upon such recognition.

Quite apart from the fact that scientific observations of this type shape the course of future research, they afford the physician a deeper insight into common factors found in apparently unassociated conditions and can contribute immediately to the more effective management of patients. Again using our recent NIH experience with alcaptonuria merely in illustration: The patient studied at our Clinical Center was referred in August 1956 with a diagnosis of alcaptonuria with ochronosis. He was then fifty-four years of age. About twenty years earlier, the first symptoms of joint disease had appeared—the "dull aching pain in the sacroiliac area"—but this disease had not been diagnosed. Later an acute episode of pain was interpreted as "ruptured disc." Ten years later, after gradual progression of both metabolic and arthritic symptoms, an erroneous diagnosis of diabetes mellitus was made on the basis of a urinalysis. Three years later the same erroneous diagnosis was made and only when a rigid diet failed to eliminate the urinary reducing substance, were further tests made establishing the diagnosis of alcaptonuria.

In the decade 1946-56, described by many as one of outstanding progress in medicine, the only "progress" in this patient was that of his disease, his pain, his deformity, his despair, unaffected by countless new techniques. Should I be far wrong in saying that such patients are the real outposts of medical research and that progress in medical science depends on the thoroughness with which new basic and clinical knowledge is applied in their physicians' offices?

Communications Between Research and Practice

Medical science today challenges the practicing physician to think—as an experimental biologist and in terms of new disciplines not fully incorporated in his basic training. Effective communication of such new knowledge thus becomes a major problem and responsibility for both medical scientists and medical practitioners. To discharge that responsibility, all of us concerned with human

beings as the subjects of our inquiries and services need to face up to a few facts.

First, although the walls of isolation between the scientific disciplines and even between the clinical specialties are yielding to reason, there are still some apparently impenetrable barriers between the "scientific community" and the "practicing fraternity."

Second, much scientific reporting in fields relevant to the study of Man is incomprehensible, except to those trained in the symbols, methods, thought processes, sesquipedalian terms, and tortured prose of the several disciplines.

Third, there are pressures, subtle and not-so-subtle, that discourage the practicing physician in any attempts to indulge his intellectual curiosity.

Communication is relatively free and speedy among medical scientists, whatever their special disciplines or clinical research areas may be. But if we view Modern Medicine, its Arts and Sciences, as a whole, we must agree that communication in a vertical direction is relatively restricted and slow.

Accessions to fundamental knowledge upon which all else depends do not remain long inaccessible to the few—the research scientists; while the many—the practitioners—remain to varying degrees unaware of basic observations until these have been hammered into a procedure or therapeutic agent by applied research and technological development, often without thorough clinical evaluation. They may promptly incorporate these "practical results" into their practice without a clear concept of the basic principles whence the technique sprang.

The laboratory researchers are the first to know about new basic findings. They have good cross-channels of communication, travel about to see what's going on in other research centers, and publish their findings promptly. They are interested in communication, but with a certain group—their "peers" in the basic disciplines. For it is a matter of survival in their fields to present their observations to the judgment of other basic scientists. With the accelerated methods made possible by modern instrumentation, basic observations can be made much more rapidly than in the past, but the range of communication remains narrow. To paraphrase a well-known jingle, the basic research laboratory seems to be:

> "The home of the atom and quad
> Where the chemists speak only to physicists,
> And physicists speak only to God."

The clinical investigator is almost, if not fully, as familiar with laboratory findings as his colleagues in the basic sciences. But he travels less and his scientific observations are reported less frequently, for his "research materials" are not easy to procure and require longer study to obtain adequate data. He is, however, in a strategic position to act as a transmitter of important new knowledge to practicing physicians. He is equally familiar with the clinical problems in medicine. Most important of all, the highly qualified clinical investigator has a keen insight into the incredible difficulties involved in applying laboratory observations to the study of Man in his environment, and thereby reaching valid conclusions.

Despite his potential qualifications as a communicator, the clinical investigator also circulates in a rather restricted area. He may have few opportunities to reach the larger group of practicing physicians outside of those who specialize in his research area. Even when he has such an opportunity, his audience may not be sufficiently prepared to receive his message; for he may present it, as does his "basic" colleague, in terms so tentative or so esoteric that his audience cannot relate it in any useful way to their experience.

In recent years, there have been several encouraging moves to sink better shafts of communication between the "scientific community" and the "practicing fraternity." Most state and local medical groups are conducting short courses, with medical investigators as guest speakers, in addition to their annual assemblies. Such is the case in Michigan where numerous outstanding state and regional centers provide readily available resources.

Postgraduate courses of longer duration are being conducted for general practitioners and specialists at different medical research institutions by such organizations as the American College of Physicians, the Academy of General Practice, and others. These courses aim to bring small groups of practitioners into close contact with the outposts of medical research; but they serve another equally useful purpose by bringing research scientists into direct contact with medical practitioners. In order to communicate in a setting more intimate than that of the large assembly

or the printed page, the scientists perforce must try to do a better job of interpreting their own work and, in doing so, to see how it fits in with the hurly-burly of the busy practitioner's office.

"The Literature"

Most practicing physicians, however, must depend upon "the literature" to keep them abreast of medical research. If there is a *general* movement to make scientific reporting more comprehensible, more "literate," I have not observed it.

A recent report on enzyme research, for example, starts off like this:

> "In a recent publication, it was reported that, although an extract of rat liver nuclei formed UDPG and UDPGla from UTP and glucose-1-phosphate and glucosamine-1-phosphate, respectively, the formation of UDPAG from UTP and N-acetyl glucosamine-1-phosphate could not be demonstrated."[4]

This goes on for two columns of 8-point type. The authors defined the abbreviations in a footnote, but it didn't help me much to learn that UDPGla means uridine diphosphoglucosamine.

I have not chosen a glaring example. Robert V. Ormes in *Science* (April 26, 1957) analyzes the use of laboratory shorthand in articles and reports submitted to that periodical in the past two and one-half years. He finds that the 485 separate capital-letter abbreviations "have had at least 542 different meanings—we say 'at least' because 109 appeared without any explanation, and almost all of the other 376 appeared in at least one article without any explanation."[5]

As used by scientists, one abbreviation can have several startlingly different meanings, as BP for "before the present," "blood pressure," and "boiling point." Or different authors may use different abbreviations for the same meaning, as NA, NAA, N2A, and ANA for alpha-Napthaleneacetic acid. NA is also used for "nicotinamide."

Although Mr. Ormes pursues the elusive meanings of scientific abbreviations in humorous vein, he is dead right in his conclusion that:

> "The saving of space . . . is hardly worth the restriction of understanding, and only a few of these abbreviations can become any more than what they are, laboratory and notebook shorthand."

Such cryptic messages cannot whet the interest of practicing physicians, even of those specialists who may possess the key to the code. Unless the theories, methods, and observations of current medical research are presented to physicians in large enough perspective and with reasonable clarity, they will not be tempted to stretch their intellectual grasp of new concepts and new problems, in unfamiliar fields where there is no immediate promise of "practical results."

Some clinical and technical journals are making valiant efforts to improve scientific reporting for physicians. More papers, for example, now include background material on the significance of the research itself, as well as on the relevance of the findings to medical practice. Such journals as the *Annals of the New York Academy of Science*, the *Journal of American Medicine*, the *Journal of Chronic Diseases*, and others have taken to publishing an entire symposium in a single issue, thus bringing together a wealth of basic and clinical thought on a particular research field.

These are good beginnings, but the total output of medical research is still far beyond the physician's reach. Meanwhile, the number of secondary publications designed to condense scientific reports grows apace. These digests vary widely in coverage and quality.

At one end, we have such unassuming but remarkably useful publications as the *Bulletin on Rheumatic Diseases*, issued by the Arthritis and Rheumatism Foundation. It provides excellent brief reports of the most significant advances in that field, and recently it has added a series of special reports describing and evaluating laboratory techniques currently applied in the diagnosis of arthritic and rheumatic diseases. At the opposite end, we have a plethora of digests that restrict their coverage almost exclusively to reports on clinicial trials of new drugs. These can have but little more value for the physician truly interested in the widening front of medical science than are the entries in a box-top contest to "tell in 25 words or less why you prefer X's shaving Lotion."

Pressures for Practical Results

The physician, of course, must have access to the latest information on drugs and other commercial products used in his practice. Unfortunately, the "latest" (that is, the most recent item of "literature") is not always the best Thorough clinical evaluation of therapeutic agents is a long, costly, and often baffling process. If it is not done under the control of many fully trained and scientifically self-disciplined minds, working co-operatively in

many different clinical settings, the results may be unsatisfactory at best, and disastrous at worst.

The pressures that force many physicians to look first for "practical results" from medical research are many. Some are the frank demands of his patients. The mass media of public information seem to have done a better job of "selling" patients on some aspects of medical research than professional media have done in the continuing broad education of physicians. A few weeks ago that delightful cartoonist, Thomas Lichty, stated the physician's dilemma precisely. The doctor tells his secretary to leave the old medical journals in the reception room and bring the current popular magazines to his office. "I'm not going to have my patients knowing about the latest 'wonder drugs' before I do," he says.

Some of the pressures are more subtle. The physician's endless battle with time and, not infrequently, his unrest in the presence of so many medical problems that he is not equipped to solve on his own, make him a ready receptor of therapeutic methods recommended to him presumably on the basis of sound fundamental and clinical studies.

Dr. Edwin J. De Costa, in a recent issue of the JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY, illustrates how such recommendations reach the practicing physician.[6] He quotes an advertisement of "a so-called improved thyroid medication" and a statement from the professional literature, both tending to encourage "the use of thyroid extract in the presumed normal individual";—that is, the patient without demonstrated evidence of hypothyroidism. He then goes on to a thorough exposition of the available knowledge and methods pertaining to the thyroid gland and the various states of its malfunction in obstetrics and gynecology.

I mention this excellent paper not because I wish to introduce a clinical problem that has been a matter of controversy for many years; but because Dr. De Costa places the responsibility for questionable conclusions equally on physicians and on "those who make and sell the products."

The course of clinical and laboratory study, diagnosis, and therapy that he recommends to physicians is not the easy way. But it is based on the accumulation of significant scientific observations pertinent to the subject down to the current year. This more arduous way is the safest and shortest route between the outposts of medical research and the practicing physician's office.

Conclusion

The changing dimensions of medical science are presenting practice with new principles of pathogenesis. If these principles do not form part of the bedrock of the physician's thought, his approach to the medical problems confronting him may lead him into blind alleys.

The practicing physician needs help from his research colleagues and from all the resources of his own and allied professions to keep abreast of the widening front of medical science, and to utilize present and future techniques effectively. In the last analysis, his own initiative will determine how far he goes toward applying the contributions of science.

Some years ago, Sir Walter Langdon-Brown quoted a friend of his as saying that the famous aphorism "Don't think, try!" had been misinterpreted because "out of respect to John Hunter the medical profession for more than a century had been trying not to think."[7] I venture to suggest, in the light of medicine's enormous possession of sciences and techniques and its still greater potential, that the proper interpretation today is "Think—then try."

References

1. Beadle, G. W.: Genetic Control of Metabolism. 1st R. E. Dyer Lecture, NIH. PHS Pub. 142 Washington: USGPO, 1952.
2. Kalckar, H. M., Anderson, E. P., and Isselbacher, K. J.: Galactosemia, a congenital defect in nucleotide transferase, a preliminary report. Proc. Nat'l, Academy of Science, U. S., 42:49, 1956.
3. Alcaptonuria: Clinical Staff Conference, NIAMD/NIH, USPHS. Ann. Int. Med. (in press).
4. Maley, F. and Hardy, H. A.: Formation of UDPGla and related compounds by the soluble fraction of liver. Science, 124:3233 (Dec. 14) 1956.
5. Ormes, R. V.: Abbreviations: Uptake of laboratory shorthand. Science, 125:3252, (April 26) 1957.
6. De Costa, E. J.: The thyroid gland in obstetrics and gynecology. J. Michigan M. Soc., 56:7 (July) 1957.
7. Langdon-Brown, Walter: Thus We Are Men. p. 132. New York: Longman, Green Co., 1939.

The Self-destructive Factor in the Medical Patient

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ALL MEDICAL MEN are quite familiar with the possibility of extremes of self-destructiveness in patients. Even though the practitioner may be unfamiliar with the complex emotions that operate, he is well aware of the facts of and hazard of actual suicide. Doctors in all fields are similarly alerted to self-destructiveness in less extreme form than suicide as evidenced by their desire to hear this less dramatic subject discussed by us today.

We hear the statement, "despite correct diagnosis and proper treatment some patients fail to improve as expected." We suggest that in such cases we have failed to make the full diagnosis and to institute the extent of treatment necessary. In other words, we may have overlooked the gamut of emotional conflicts operating self-destructively in the patient. Facets of the self-destructive drive may be conscious as in the overt act of suicide or in creation of factitial lesions. The driving conflicts and mechanisms behind the acts, however, are largely hidden from the patient's awareness. In the many cases we shall describe today, large or total factors in the drive to self-destructiveness are completely pushed out of the patient's conscious awareness because they are too painful.

With no intention of burdening the reader with complicated personality mechanisms, we do hope to introduce some clarity into the fundamentals of the drive to self-destructiveness. You will soon see that no one out of the blue wishes even partially to destroy himself or disrupt his bodily health in any way. We do not hold with any theory that man is born with an instinct to destroy himself. We believe that the drive to injure the self develops out of an adaptation to experiencing in early childhood destructiveness on the part of a significant adult. These experiences, and many of the mechanisms adapted to such experiences, become buried in the unconscious, far away from conscious awareness, but still drive your patient unwittingly to operate accordingly.

Let us explore how early experiences of a child induce all degrees of self-destructiveness. We know a great deal about this through detailed study and observations of the behavior going on between parents and children. Here we observe how a parent's conscious or deeply buried destructive hostility is directed toward the child and its effect on the child. Such transactions very early between parents and the young infant are far less well documented but they must have a profound effect on the sensitive early developing neurophysiologic structures.

However, for example, let us take what may go on steadily day by day between parents and a three-year-old child. In the symbiotic relationship with the mother, the child must learn to adjust to all facets of the mother's personality, healthy and unhealthy. Since in the child's helplessness he needs the mother for survival, the child *must* adapt to the mother's behavior. Any infant and child can stand moderate degrees of frustration and with comfort can adjust healthily to gradually increasing moderate frustration. If the child is guided firmly but with affection no serious conflict ensues. Every little child like any adult feels resentment when frustrated. This resentment can be handled by the mother in a healthy way or in a manner productive of conflict. If the parent remains firm about what she wants done by the child but permits him to talk and sputter a bit about his anger, all will go well.

If the mother, instead, becomes very harsh and punitive about the child's resentment, the parent can make the child very guilty. Depending upon the harshness of the mother's reproach the child can develop such a degree of guilt that con-

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sciously and less consciously he is continuously feeling he should atone for being naughty. The more frustrated he becomes, the anger, without outlet, mounts and because of the mother's tone and words and facial expressions, the child's guilt spirals upward. How is the need to atone handled in childhood and as years wear on? The little child may push himself to be very naughty in order to be spanked. With the latter punishment he often noticeably relaxes and is happier.

Again, when very guilty he may become subdued, depressed and withdraw from everyone and all activities. He may become the well-known martyr in relation to friends and family throughout his life. Or, he may complain of stomach ache, headache, vomit and be unable to retain food, may fail in school or may be accident-prone. He may automatically arrive at an awareness of some self-destructive psychosomatic respone that appeals to his mother or, at times, to the father. Illustrative are the cases of soiling until late childhood. The child and mother may feel miserable consciously, but underneath the child senses that the mother wants this soiling to continue. The mother derives gratification and the child achieves a distorted pleasure out of pleasing her, though he suffers with shame and misery in the presence of other adults and children. Only psychiatric help for parent and child will alleviate these malignant instances of soiling.

One can recite scores of forms of neurotic suffering and atonement in children. Older children, like the adolescent, may go on to suicide. We shall recount many cases in this paper to illustrate this self-punishing attitude in adult patients.

Let us not be deceived that the child or adult develops his symptoms and reactions in order to gain attention. He develops them to ease his guilt, to appease his parents and if he gains attention in his illness, this is a secondary outcome. To be sure, when such attention gratification is forthcoming, it becomes a catalytic agent in the already-established, vicious circle.

It would appear that with self-destructive, self-punitive, guilt-laden reactions in a child that concomitantly the parents direct a hostile destructive feeling toward the child. This has been proved unequivocally in many research studies. The self-punitive child is also angry at the parent, and thus self-destructive behavior or suicide can be and is, in part, retaliatory toward the parent. This is the revenge.

Report of Cases

Case 1.—We saw a brilliant thirty-two-year-old lawyer who came referred by his internist because though he weighed 380 pounds he could not reduce. The patient was a trial lawyer who consciously felt ashamed and miserable about his appearance both in court and socially. He was deeply interested in a fine young woman but was too ashamed and shy to approach her in any way but in a superficial social contact. He felt that he was destroying his real happiness in life because of his obesity. Fortunately he had an internist who did not intimidate and bedevil the patient who could not diet. In one interview the emotional structure of the problem became clear although it took three and one-half years of intensive treatment to lead to a slim figure and a happy marriage. This wealthy, eminently gifted lawyer lived with his mother, the father having died when the patient was eleven years old. The mother had told the patient as a child that she had never wanted more than two children—the patient was the third.

The mother was chronically nagging and critical in all areas but one. She loved to cook and eat and wanted the patient to enjoy her cooking. Only when he ate were he and his mother en rapport. Although he was a fine student, his mother still was not satisfied. Although she was wealthy and could in her old age afford a chauffeur, the mother interfered endlessly with plans of the patient so he would be her chauffeur. In his high school days when he was not so obese and still had some courage his mother sarcastically derogated every girl he dated. From earliest childhood the mother and father had harshly prohibited any expression of resentment from the patient, so that by the time one of us began treating him, he could never remember having talked up nor having stood his ground with his mother. In fact, he was not even conscious of feeling hostile until well along in treatment.

In other words, he was completely tied in a coercive, impossible, hostile relationship with his mother having only one outlet for accord and peace, namely, eating. In treatment as he resolved his conflicts, he freed himself from his mother, talked up firmly and moved to his own apartment. His mother became increasingly anxious and depressed—so much so that she had to have very definite psychiatric care. In this case it became quite evident that the patient was tied in a hostile submissive relationship to the mother, realizing only one modicum of peace with her and that was such overeating that it was destroying his chance for real future happiness.

Case 2.—A great deal of intensive research must be done on the baffling and, at times, fatal problem of anorexia nervosa. This is one of our current research interests and we are in no position yet to make detailed generalizations about all cases. However, one case (of many others) illustrates the conflicts that may underlie the profound self-destruction. In some cases the acuteness of the conflict is with the father, in others with the mother, but in all cases both parents are seriously involved by the destructiveness directed

toward the child. After a period of dieting in order to slim down, as is so frequent in these histories, this beautiful eighteen-year-old girl, popular with both sexes, finally went down to sixty-four pounds. She engaged in all of the common maneuvers—refusal to eat, hiding food, taking boxes of laxatives if she did eat, et cetera.

This girl's mother had had an explosively hateful relationship with her own mother. It was not surprising then that our patient had felt nothing but tension, criticism and coercion with her mother since earliest childhood. The only warmth she experienced came from her father. He had a miserable life with his wife and although very wealthy and prominent, he was quite unhappy.

As our patient entered adolescence her father, obviously a very neurotic man, entered into many sexual intimacies with the patient. The pathologic relationship extended to breast caressing and mutual genital handling as the patient sat on his lap. The father was blatantly acting out his incestuous feelings toward his beautiful daughter. The girl stopped dating because all sexuality became fused in her mind with her father. She put a stop to the intimacies with the father and reduced to the point of extreme emaciation. She was now no longer beautiful nor attractive to anyone, was ridden with guilt toward and fear of her mother, and although unconsciously fascinated by her father, was conciously enraged at him. As long as the unconscious sexual attachment to her father existed, she had to atone to her mother and defend herself by being ugly and wishing to die.

Although we have observed serious incestuous acting-out in a number of the anorexia nervosa cases, we do not wish to convey, in any sense, the impression that this is the constellation of conflicts underlying all cases.

One of our internists who knows far more of the medical care of these patients than do we psychiatrists began treating the patient medically with his firm, kindly, fatherly manner. After an initial improvement, the patient went downhill rapidly. There was no doubt that the patient soon fused the internist with her seductive father, unconsciously, and had to resort to her old defense of not eating to atone for and ward off her unconscious wishes that the internist seduce her. The patient finally had to be treated by a psychiatrist.

Case 3.—As Karl Menninger has said, "Alcoholism is a chronic attenuated form of self-destruction." Each alcoholic patient obviously must be studied to understand and cure his illness. The fact that one psychoanalyst analyzes three cases and finds in each a profound homosexual problem should give no license to conclude that this is the basic conflict in all alcoholics. This is not the case and in those cases where such a conflict is prominent, that is not the entire basic story.

A woman patient was reared in an atmosphere of great coldness and distance on the part of her mother. At the same time, no word of resentment by the child was ever allowed expression. This patient was an alcoholic who also became suicidally depressed. She was an inordinately guilty person about her great unconscious hostility. Her father had always been far too seductive with her and depreciated the mother to the girl. The child was always very neurotic and by college days had a great deal of free floating anxiety. The mother said that she would rather the girl would take alcohol than smoke. The patient, seeking a physician about her anxiety, was told that she should drink some to take the edge off the anxiety. The father continued to be seductive even long after the girl was married. At the same time he hated her drinking and was very ashamed of her. She had to be hospitalized for a long period early in her psychiatric treatment. In brief, never having had security with her mother the patient guiltily hated her mother and in addition was guilty toward the mother over her childish attachment to her father.

The girl followed the mother's destructive suggestion that she take alcohol to dilute anxiety. Her alcoholism not only fulfilled a suffering atonement for her hate toward the destructive cold mother but also warded off the seductive father, who was ashamed of her degrading alcoholism.

It may not be amiss to remind the reader that much of this patient's feelings toward both parents was unconscious until far along in the treatment. It was because she had always been made to feel guilty about resentment that she repressed it. Thus the patient had no conscious awareness early in therapy as to the reasons she was destroying herself with alcohol. And indeed for a period she came close to the brink because of severe liver damage.

Case 4.—An eighteen-year-old son of a Greek family was an immature, indecisive, obese diabetic who kept himself constantly out of diabetic control because of "my rebellion against diabetes." As a young adolescent, he alternately used his metabolic disease to obtain his mother's favor and then to elicit her rejection. He stated that he felt the urge to "let himself have it" after his mother's tirades against his excessive intake of candy and food and on several occasions was precomatose and acidotic. Joseph was the subject of many sadistic beatings by his father, yet when we first saw him he declared for several months the "great love I have for my father." The patient had some courage to fight his father and once after further inciting his father's rage, the latter had a stroke and died. Since this father usually atoned for beating his son with elaborate gifts, trips and attention, the boy had great guilt about expressing his rage. These phases of guilt were frequently associated with acidosis.

In treatment the patient analyzed and lived through with his male therapist his rage and guilt toward the father. As the patient finally learned to depend upon a consistently friendly but firm therapist the diabetes came under control. Having so many of his dependency feelings resolved and satisfied by his therapist he had less need to turn to the mother who was so inconsistent. Finally the boy came to realize affection and consideration from his therapist without first having to experience a beating or acidosis.

Case 5.—A sixteen-year-old high school girl was seen because of extensive hemorrhages into her skin. The

hematologists, dermatologists and orthopedists made extensive investigations into the possible purpuric nature of these lesions. Negative laboratory findings and clinical opinion suggested that the lesions were quite atypical and psychiatric evaluation was requested. Clara had been a sickly child requiring several periods of hospitalization. Such medical care for what appeared to be functional complaints always resulted in the cessation of symptoms. The mother, basically resentful of this child, was always overprotective, nagging but especially oversolicitous when the patient was in the hospital.

Collaborative psychiatric study of the patient, mother and father revealed the fact that the mother suspected that Clara was pounding her extremities in her sleep, thus producing the lesions. The mother had actually seen one of Clara's nightmares when she was pricking and pounding her legs. The mother strangely enough did not awaken the child nor even tell her what went on in sleep. The malignant destructive wishes of the mother toward the child were easily exposed with the help of the mother's therapist. The child working with her therapist was able to realize consciously the self-destructive feelings she had as a result of her violent hate toward her mother. The skin lesions cleared as the patient resolved her conflicts and her mother, through therapy, was able to live a more friendly satisfying life with the daughter.

Case 6.—A twenty-five-year-old man from Montana was "plagued with" thromboangiitis obliterans. The ulcer over the medial malleolus was small on admission, but rapidly enlarged overnight when the patient's very severe pain became intensified while angry at the floor nurse who overlooked giving the man one dose of levo-dromoran. The patient was noticeably agitated but was unable to express his feelings of anger about this oversight. Upon noticing the considerable enlargement of the ulcer the physician pointed out to the patient that as he was rubbing his right great toe his fingernail was rubbing the ulcer. The patient refused to believe this. Similarly, he refused to stay in bed or to elevate the extremity, with the result that induration ensued.

The self-destructive components in this patient's behavior demanded that he have intensive psychotherapy. In such treatment, the patient was able to recall the hostile feelings he had toward his father who kicked him "in the pants" recurrently when he was a boy, because of the patient's inability to carry his share of the farm work even when seven or eight years of age. The brutality of the father toward this patient and the boy's murderous rage toward the father appeared. He longed to kick the parent as he, the patient, had been kicked. As these impulses came to awareness with no reproach from his male therapist the pain subsided greatly. With the death of his mother when he was five he could turn only to his older sister for affection and consideration after the father's beatings and because he had no trust in men. As many of these feelings were worked through in therapy the patient became tractable, pain lessened, he stayed in bed and the ulcer healed. Of course, the Buerger's disease was more easily controlled because of diminished pain, and when the patient no longer felt in such a guilty self-destructive mood the realistic threat of amputation was a considerable impetus to his following out the internist's advice.

Case 7.—A thirteen-year-old boy came to us with a history of twenty-four accidents involving either fractures or lacerations requiring surgery. We saw him after he had been shot by an adolescent friend while the two boys were threatening each other. This patient had been made excessively guilty about his resentful feelings as a child and during the early years he handled these by withdrawal and depression. As years went on, the patient was hostilely provoked and taunted to be very tough and foolishly brave by his father; this boy began to handle his depressions and guilt by placing himself in excessively dangerous spots. This reckless self-destructive behavior fostered by the father resulted in near-tragedy several times. The boy after considerable and long psychotherapy is making an excellent adjustment. The accident-prone patient is readily recognized today by most physicians.

Case 8.—A thirteen-year-old came to us complaining of loss of hair from eyebrows and scalp in areas showing ragged borders. She was wearing a cap. The mother told of finding hair in the child's bed after each night's sleep. The patient had had the habit of twisting her hair as a child (four to twelve years of age) and biting her nails whenever she was unable to express her anger to her very domineering and harsh mother. The mother held rigidly taut reins on this child, requiring her home from school very precisely, allowing her no time from home to have friends or even play with other children. The mother threatened all of her three children with the scissors whenever she was irritated with them. She admitted that she never allowed them, however, to express any anger in any form. There seemed to be only one thing about this girl that from early childhood pleased the mother. This was the child's beautiful hair which the mother always combed lovingly and with pride. The mother was horrified to find the bald spots and thinning of this hair. The hostility this adolescent felt toward her mother found its punitive outlet in ruining the hair which was the mother's pride and joy. Although the patient consciously disliked her appearance, the revenge was worth it. The mother and child both had to have psychiatric treatment.

Case 9.—A forty-two-year-old woman who, since the age of twenty years, had had thirty-six surgical operations because of pain was seen. In every instance except two, according to the records, no satisfactory organic explanation was forthcoming. This was a case of a very self-destructive patient who visited physicians to play one consultant against the other. Initially, she was furious at the suggestion that she should see a psychiatrist and angrily told the psychiatrist that hers was a very happy family and that she had had a short but happy marriage. Later the psychiatrist learned from

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Editorial

MEDICINE—PROGRESSIVELY PREVENTIVE

Among the most significant achievements of the last half century has been the tremendous interest in health aroused in the general public. From an era when a small band of resourceful, imaginative people, dissatisfied with the status quo, launched attacks against a few diseases, we have come to a constantly waged war on disease by a large standing army recruited from the lay public. leadership in this campaign has been rightfully entrusted to the medical and public health professions, to the press, radio and television. The rôle fulfilled by organized medicine, national in its scope, reaches down to the individual physician wherever he may be located.

State Medical Societies, as units of the national organization, have had for many years Committees on Preventive Medicine to guide and integrate the activities of numerous specialized joint committees. These deal with every known phase of disease prevention and treatment, from the infectious to the degenerative, an important part of their duties being concerned with enlightening the practicing physician and through him his patients.

It is to the unremitting efforts of these devoted grass roots committee members that this special number of THE JOURNAL is dedicated. The manuscripts submitted, representing but a small cross-section of the many problems under consideration, demonstrate the constant and serious concern with both the present and future health of the public.

WILLIAM S. REVENO, M.D.

MEDICAL EVOLUTION

Every practitioner of medicine is or should be familiar with the Hippocratic Oath. Every one is supposed to have taken that oath when he received his degree in medicine. Most doctors have a copy of it framed and hanging on their wall. For countless generations that was the guide stone and code of practice of every responsible medical man. There were very few medical schools and the men who wished to practice medicine must of necessity study with an older man, a preceptor, who taught him the "art and science of medicine." As our country, population, needs for medical services grew, medical schools developed, and a majority of prospective doctors studied in them. Some of these schools were remarkably good institutions, while some were purely commercial affairs whose objectives were to teach new doctors, collect fees for the service and extend the reputation of the teacher.

Toward the end of the 19th century, it became evident there must be some regulation of the practice of medicine. Our state legislatures established medical practice laws, setting up examining boards, established requirements of study and then issued licenses to practice. The license qualified a man to practice "medicine and surgery and midwifery." In the early years of this present century, the Carnegie Foundation made a study of medical schools (Flexner Report) to determine whether they were actually equipped and were giving sufficiently good training so that their graduates would be competent. The immediate result was a reduction in the number of medical schools, a great improvement in the training and education and the establishment of a standard four year course of study instead of the one or two or three which had been the previous rule.

Self Limitation

At first, every doctor, as his license said, was a general practitioner. He did the things necessary to take care of his patients. As medical knowledge grew and the possible services increased, certain fields in medical practice and certain men became more prominent. Some doctors became known as surgeons, eye, ear, nose, and throat specialists, neurologists. Most general practitioners still rendered all services but referred the complicated cases to the ever-increasing number of "specialists." There seemed no adequate way to control this tendency from the standpoint of the police power of the state. The medical profession early began to set up its own controls. It voluntarily established the American College of Surgeons, and later the American College of Physicians, with certain additional educational requirements and the passing of qualifying examinations to determine whether an applicant was quali-

President's Message



Medical Education Week

This number of THE JOURNAL is dedicated to Preventive Medicine and the Committee and authors are to be complimented on the splendid result that is before you.

This phase of medicine is one of the most important aspects of health insofar as the public is concerned. Also, to us. However, we appreciate that there are other facets in the overall picture of good medical and health care to be given to the people of our great nation.

The week of April 20-26 has been designated as "Medical Education Week." This will be observed throughout the nation and will be co-sponsored by the AMA, the Association of American Medical Colleges, The Woman's Auxiliary to the AMA, The Student AMA, The American Medical Education Foundation, The National Fund for Medical Education, and your State Society.

Each local society, through its Public Relations Committee and its officers, is charged with the responsibility of bringing to the public the full scope of what medical education is achieving. Pressure from many sides for someone outside the medical profession to assume and direct the complete control of not only the availability, but also the development of adequate medical coverage, makes it imperative that each of us do our part in this program.

This is not only an immediate task but also one of a continuous nature—for what we do now may be in a "preventive" sense for the future, in that we preserve for the people the finest medical care of any nation on this globe.

This may be one of the few remaining bulwarks of Free Enterprise, but I believe in fighting for it!

Geo. W. Slagle.

President, Michigan State Medical Society

fied for this restricted specialty. He was then supposed to confine himself to that particular field. Soon the need developed for much more extensive restrictions. Specialty societies were organized, as well as specialty sections in the American Medical Association and the state medical societies. The College of Surgery and the College of Physicians soon followed, with the establishment of a Specialty Board, then another. There are now nineteen with one in General Practice brewing. The 1910 decade and the 1920's saw this deevlopment.

These Specialty Boards, the College of Surgeons, the College of Physicians, set up their own standards for the people who wished to practice in their special field. Our hospitals were very soon happy to adopt these same regulations, urged their staff members to become departmentalized and to accept these standards or their equivalent as criteria for practicing in the hospital.

From the medical profession standpoint, this has been an entirely voluntary self control found to be necessary for the protection of our patients and because there was and is no regulation in the fundamental laws under which we are practicing. It seemed to be impossible to accomplish this purpose through legislative action. The medical profession set up its own regulation through the medical societies, national, state and local as well as the specialty societies—all for our own internal functioning. Staffs of the various hospitals throughout the nation, in order to carry through the increased responsibility, increased ability, and to insure that their patients should be exposed only to the very best and most highly trained service, set up rules and regulations restricting every doctor practicing in the hospital. He was required to conform, to make records, to attend meetings, to do preparatory study if he wished to do special work.

A Changing Scene?

Much of the picture which has just been painted occurred long before the majority of our doctors ever started practice. In fact, most of this self-regulation had developed during the years when the practice of medicine was a dedication of each physician to his own group of patients. A young man entering practice used to work for years before he had established sufficient clientele to earn even a decent living. From five up to ten years was considered the ordinary probationary period for a man to make his reputation, demonstrate his abilities and attract enough patients to be comfortable. During most of those years, the general economy of the nation was such that only a comparatively small percentage of the people could afford or pay for the constantly improving and extending medical services which were becoming available. The depression years of the 1930's and the early 1940's exemplified the fact that when a great social need occurs a solution will inevitably follow.

During these years, the medical profession—not the national body, but the local hard-working group in direct contact with tragic distress, evolved and established the theory of providing absolutely essential medical care for these people through the principles of prepaid insurance. This was an absolutely new philosophy which the insurance people had declined, believing it could not work. The national medical society frowned, but the local pioneers were experiencing tremendous economic pressure and were willing personally to take chances and guarantee services which insurance experts said could not be done. These local groups established the prepayment medical service programs—for hospitals as well as the medical profession.

Our Blue Shield was born of necessity and desperation, and in its forming we had a tremendous part in changing the philosophy of the whole American nation by which so many are now budgeting for their major requirements.

WHAT OF THE FUTURE?

We have a Supreme Court decision in Michigan denying the right of the medical staff of certain hospitals to require standards of perfection, education, training or willingness to conform to rules regarding care, records, and other matters pertaining to patients. It states that the only authority to curb the practice of a physician in any way in this group of hospitals is in the legislature or in the State Board of Registration in Medicine which licensed the physician. Although this decision applied specifically only to a few small county hospitals, the decision was scarcely made when Wm. A. Kopprasch, M.D., of Allegan, brought suit against the Michigan State Medical Society, the Allegan County Medical Society, the Michigan Hospital Association and the Allegan Health Center (a hospital), claiming $750,000 damages and conspiracy to prevent him from

practicing in the Health Center. This suit sought, by analogy, to extend the unlimited right to practice in hospitals without regulation or control, far beyond that recognized by the Supreme Court in the county hospital case.

The original bill of complaint was filed January 17, 1955. In November, 1957, the trial judge absolved the Michigan State Medical Society, the Michigan Hospital Association and the Allegan County Medical Society as defendants. At our latest information, this case had not yet been terminated.*

On November 22, *AAPS Information Bulletin* reported a damage suit filed in Colorado. Two United Mine Workers salaried physicians filed suit against the Las Animas County Medical Society (Trinidad, Colorado) for $75,000 damages to each of the two physicians who have been rendering medical services to the beneficiaries of the UMW fund, alleging the two "approved" physicians were denied membership in the County Medical Society. The officials of the United Mine Workers retain and exercise the right to select "approved" doctors to care for their patients and refuse to pay others, but apparently, they hold that the County Medical Society has no right to "select" and "approve" doctors for membership in the Society.

The *Detroit Free Press* of January 11, 1958, contains a long story of Neil H. Sullenberger, M.D., who was threatened with suspension from the staff of Pontiac General Hospital on November 13. On December 2, 1957, he sued to prevent suspension and asked $250,000 damages. In answering the suit on December 31, 1957, the hospital superintendent listed twenty-five cases of alleged violation of hospital standards, in six of which cases the patient died. This case was also abstracted by *Time,* January 20, 1958. It is reported there is another suit of four general practitioners trying to compel the Pontiac hospital to accept them for unlimited surgery.

It has been the custom of every hospital of any standing and the requirement of The Joint Hospital Accrediting Boards previously conducted by the AMA, the American Hospital Association, or the American College of Surgeons, to set certain requirements or principles governing preparation, experience, willingness to work, to respect the rules regarding records, procedures, et cetera. This procedure has been generally accepted by our doctors, by the College of Surgeons members, by the American Medical Association members, and our county and state medical society members, as well as the staffs.

Doctors, in increasing numbers apparently are attempting to bypass all the constructive work of the medical profession in the last half century. The state licensing boards simply determine whether the man had studied medicine and could answer some questions. There is no way of determining his competence. His license gives him the supposed "right" to do anything in the field of medicine. The growth of the science of medicine and the accomplishments of the last half century are so absolutely astounding, that no one man could accomplish them all; no medical school could teach them all in the four-year course and one-year internship. In the very nature of things, some restraint must be exerted. That is the reason for the establishment of the various surgical and specialty boards and the adoption of rules and regulations for use in the hospital.

The new group, who are making unfounded and uncontrolled demands for unlimited rights to practice, are posing a problem our profession must face. After a half century of progress must we now turn all of those rules and regulations, accomplishments against great odds, and controls over to the government? If that must be done, medicine will have lost its last shred of independence when some bureaucrat determines the rules under which we work and sets up restraints to keep us in line. We shall have lost the fight.

One case in our Michigan Supreme Court was lost. We must not lose another. The majority of our hospitals can still make just rules, assuring the patients the best possible medical attention available. If some of these recent threats should prevail, that last restraint will be gone. The Michigan State Medical Society was not mentioned in these suits but is involved, and we hope will be allowed to argue its side of the case.

The Michigan medical profession, as in so many issues in the past, is again fighting for the rights and protection of the health of the people of our state. We brought them relief from poorly

*On January 31, 1958, Circuit Judge Raymond L. Smith ruled that Dr. Wm. A. Kopprasch was legally entitled to membership on the medical staff at Allegan Health Center, subject to its by-laws. The judge said "the Health Center had been unable to come up with any case of malpractice, unprofessional conduct or lack of ability to support its failure to admit Dr. Kopprasch to the staff."

trained doctors in the early years of the century under the goading of the Carnegie Foundation; we made available to them by prepayment the major and essential health services during and after the great depression years; this last year, we have undertaken another study to determine what the people want and desire in extended and improved prepayment medical care; what the doctors believe can and should be rendered; and what both feel should be the costs.

The result of that "market survey" is now largely incorporated in new policies being offered by Michigan Medical Service. These policies are so broad, so flexible, and so all-inclusive, that any group may protect for almost any type of program it wishes, including the benefit of partial payment or co-insurance; if it wishes, it may provide for complete coverage.

The medical profession has met these problems as they have arisen and has always found enough far-thinking, dedicated members willing to give time, strength, and genius to working out presumably unsolvable problems. We pray this innate ability in the medical profession will stay with us through the trying years and problems we are facing. We have always had complete confidence, have always believed that right will prevail. Nature always provides a stalwart form to carry on when some predecessor falls by the wayside.

PRINCIPLES FULLY IMPLEMENTED

What has happened since the House of Delegates unanimously adopted the new Principles of Medical Care Insurance last September? Are these principles being implemented? We find that much has transpired and that methods are being developed to carry out the principles.

The Medical Care Insurance Committee (MCIC) was appointed and has met for long hours on several occasions. To it has been presented the proposed new contracts of Michigan Medical Service (Blue Shield). These contracts have been examined in meticulous detail by the MCIC and found to adhere scrupulously to the Principles. The Council of the Michigan State Medical Society has approved the recommendation for endorsement.

The California Relative Value Scale has been examined, and, with very few modifications, has been approved by the Council for use, as set forth in the Principles, as a basis for the Dollar Allowances to be used in the new MMS contracts. Unit values for each of the contracts have been established and approved by the Council.

We learn that the new fees will demonstrate an increase of about 11 per cent in the new $5,000 contract over the old. In the Opinion Survey, physicians overwhelmingly favored a $7,500 contract provided there was an increase in the fee schedule of 32 per cent. We learn that the new $7,500 contract will have a fee schedule that is about 31 per cent greater than that of the old $5,000 contract.

It is to be noted that the premium cost to the subscriber has been kept within realistic limits. This we regard as truly remarkable when one contemplates the broad increase in benefits, the new method of determining income-level, and the completely fair method developed for determining fees.

Many complex problems have been dealt with in developing a program that will bring forth contracts that will be fair and satisfying to the patients, to the physician, to the carrier.

We congratulate The Council, the Medical Care Insurance Committee and the Michigan Medical Service for the dispatch with which they have implemented the principles.

Much has happened since the House of Delegates issued its mandate.

IS BLUE SHIELD A "THIRD PARTY"?

"Blue Shield Plans exist only to help the medical profession facilitate the provision of its services to the people. . . . Blue Shield is an organization of the profession itself, and not a third party between doctor and patient."

So declared the Blue Shield Commission in a recent policy statement. The Commission is the elected board of directors of the national association, "Blue Shield Medical Care Plans," whose members are the seventy-odd medical society-sponsored, nonprofit Blue Shield Plans. A preponderant majority of the Commissioners are doctors of medicine.

The medical profession, through its own instrument, Blue Shield, pioneered the great uncharted realm of medical prepayment at a time when commercial insurance companies declared it was actuarially impossible, and when the bureaucrats in Washington asserted that only big government could do the job.

What is a "third party between doctor and patient?" In simplest terms, a "third party" must be some person or agency over whom neither the first party—the patient—nor the second party—the doctor—has any direct control; someone independent of both doctor and patient.

The first requirement of a medical prepayment plan that wants to call itself Blue Shield is that it be approved by the county or state society in the area that it serves. The second requirement is that all medical policies and operations be under medical control; and the third, that it earn the voluntary participation of at least a majority of the doctors in its territory.

Blue Shield is not a "third party." In truth, Blue Shield has proved that doctors and patients, working together, can solve the problems of medical economics without needing any third party to come between them.

SEEING ONLY THE TREES

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physician either in manner of payment or amount of fee for the rendered service. This presents many obvious hazards: viz, an *ex-cathedra* dictum might destroy more than it is worth.

Somehow we need to remember that the prepayment plans were Medicine's answer to the threat of governmental medicine. They did answer this challenge and their real worth to all concerned is substantially greater than all these pages could recount. This dynamic state has created, in turn, a social philosophy which now is part and parcel of mid-century America. But the old threat is still with us—from government or from consumer groups. This is the broad arena—the center ring—and if the little things divert us now we may well miss the forest.—WILLIAM BROMME, *Detroit Medical News*, February 3, 1958.

Few projects before the American people are of greater importance than the matter of cancer control.

* * *

Although details of deaths from cancer are available, details of all cases of cancer are needed to complete knowledge of the disease.

SELF-DESTRUCTIVE FACTOR

(Continued from Page 403)

the patient that her husband was an ex-convict, her father a brutal alcoholic, and her mother a cold, rejecting, hostile woman. The brother was a sadist like his father who continued to the present to have brutal temper tantrums. The patient had never had any satisfactory outlet for her own fear and resentment. There had been no warmth nor consideration expressed toward her by any family member. Her mounting loneliness, tension, rage and guilt led to pain which secondarily elicited consideration and solicitude on the part of nurses and doctors. The secondary gain only helped to fixate her profound necessity to atone for murderous wishes through surgery. Following surgery each time her tension and guilt were relieved and temporarily her mood was excellent. As the relief through the atonement of surgery wore off, the pains returned.

Case 10.—Sometimes patients recover much more rapidly after surgery and appear in a far happier mood than is normal. We were treating a woman in a deep depression. She developed sudden severe uterine bleeding. Diagnostic study resulted in the decision to do a hysterectomy. The patient was very happy after surgery and for two months all of her old interests in the family and community returned. Hysterectomy to her meant punishment, personal sacrifice and atonement. Thus, for a time, her deep-seated guilt and self-destructiveness were satisfied. It was no surprise to her psychiatrist, however, when the old depression and guilt returned. This was a woman who for years enjoyed the fantasy that she would be completely crippled with arthritis. Only careful psychiatric study will reveal hidden emotional factors that may underlie slow or very rapid apparent improvement with surgery or other organic disease.

Summary

Early in life children may develop great guilt about their hostile feelings because the parents can permit no overt expression of any resentment from the child. Even though the parents obstruct any expression the child cannot help feeling anger at times. He must repress it and conscious and unconscious feelings of guilt, and need to atone may direct his total economy, emotionally and psychosomatically. Such unconscious guilt and need to punish the self lead to all degrees of self-destructive behavior and psychosomatic pathology which may confuse and obscure the picture. This confusion is especially baffling when organic disease is also present. Successful therapy in surgery and medicine, then, will of necessity include consideration of the patient's total health, organic and emotional.

The Bold New Look

AMA Reorganization Plan Shaped by Delegates in Philadelphia

When a small group of scientists met in Philadelphia 110 years ago seeking to improve the practice of medicine from within and to increase respect for the profession from without, their efforts resulted in the birth of the American Medical Association.

In December, 1957, a larger, but no less dedicated group gathered in the City of Brotherly Love and approved a modern blueprint for streamlining the management of the now great AMA.



The recommended changes were presented to the policy-making House of Delegates by Michigan's able William A. Hyland, M.D., of Grand Rapids, chairman of the five-man committee assigned to study possibilities of improving AMA managerial practices.

Medical science and the times have altered since the founding of the AMA more than a century ago. To see just how much they have changed, and how well the AMA had adapted itself, an organizational survey was ordered by the Association to cover all phases of its activities and functions. It was conducted by a private research firm, Robert Heller Associates, of Cleveland.

Heller Report

The Heller Report, as the survey was called, recommended modernization of various managerial practices and formations which the researchers believed were antiquated. The constructiveness of the overall report was recognized, but its all-inclusiveness meant that thorough study by M.D.'s was necessary so that the findings might be viewed in light of the medical profession's unique requirements.

The Report seemed to say that, like Topsy, the world's largest medical organization just grew.

It has grown until today the American Medical Association has a membership of over 160,000, lists scientific and socio-economic committees by the score, and employs a staff of doctors and lay persons who fill nine floors of the headquarters building in downtown Chicago.

In recent years, the AMA has been alarmed at its ever-increasing overhead expense. Portions of the Heller Report advised methods of reducing expense and increasing commercial income. Not being of major policy importance, some of these and other recommendations were referred to and adopted by the AMA Board of Trustees.

Great importance, however, was attached to the survey's revelation that the AMA was a trifle muscle-bound when it came to making quick policy decisions. The Heller Report indicated that a revision of the chain of command might speed up corporate reflexes.

Executive Vice President Recommended

The Hyland Committee recommended the appointment of an executive vice president as the chief staff officer responsible to the Board of Trustees and urged that the General Manager's position be eliminated. The Board will continue being responsible to the House of Delegates.

Another adopted recommendation combined the duties of the secretary and treasurer into an appointive post to be filled by a Trustee, thus separating the duties of the Secretary-Treasurer from the Executive Vice President.

Another highlight of the Philadelphia action favored discontinuance of the office of Assistant Secretary but paved the way for the creation of the post of Assistant Executive Vice President.

In addition, it was agreed that the Council on Medical Education and Hospitals and the Council on Medical Service should continue in all respects as standing committees of the House of Delegates, though the administrative direction was to come from the Executive Vice President.

The Delegates also approved the recommendation limiting the voting members of the Board of Trustees to eleven (nine members, the President and President-Elect). The AMA Vice President, House Speaker and Vice Speaker were authorized to attend all Board meetings but without voting privileges.

Because of high interest among Delegates regarding a proposed change in method of electing the Trustees, the question was left to a floor vote. The House voted that the election of the individual trustees should continue to be based upon an at-large nationwide principle and not upon representation from specific physician-population areas of the country.

Continuing Review Committee Approved

The Hyland Committee did not leave the impression with the Delegates that the improved AMA managerial operation was now cast in a permanent and unbreakable mold. On the contrary, they recommended that a continuing committee be established to consider redefinition of AMA scientific and basic programs, to place more emphasis on scientific activities, and to study socio-economic problems while taking the lead in creating more cohesion among national medical societies.

Thus, modern business practice was brought to organized medicine, reflecting the Hyland Committee's awareness that there are only two kinds of organizations, the quick and the dead.

In the true striped-pants school of diplomacy, the Hyland Committee report succeeded in accomplishing the desired goals without alienating any group or individuals. This was no mean task but it was essential if the modernization was to take place.

In Doctor Hyland's own words, "In our visits with so many of the officers and personnel of the AMA, this committee obtained an impression of a vibrant human element that is rare within organizational structures. With such a devoted group, there can be little doubt that the AMA will reach the heights we all wish it to attain. It is this committee's fondest hope that recommendations based upon the Heller Study will forge a closeness of feeling between the House of Delegates, the officers and the Board of Trustees. We believe that there must be no barrier to mutual understanding, co-operation and respect; therefore in the suggested reorganization, the House loses none of its prerogatives, nor is the decision-making ability of the Board lessened in any degree."

Dr. Pino Pioneered Progress

For Michigan to play a leading role in the Heller Report and subsequent House action is no accident. Years ago, Ralph H. Pino, M.D., of Detroit, urged that the AMA be reorganized on a big business basis. This was considered a drastic proposal in its day. But Doctor Pino persisted in his point and helped prepare the basic groundwork which culminated in the 1957 modernization program.

Principal among those who early recognized the need for re-evaluation was Doctor Hyland—surgeon, diplomat and public-minded physician with business acuity to spare.

An eminent surgeon, Doctor Hyland is a rare blend of the scientific and the socio-economic. Said MSMS president George W. Slagle, M.D.: "Doctor Hyland was uniquely qualified for the task assigned to him in studying the Heller Report. His diplomacy was needed in fullest measure. He has achieved an unusual balance and combination of science and economics through years of leadership in medical and voluntary health organization and through constant study of the scientific advancement of medicine."

After graduating from Georgetown University School of Medicine, the Grand Rapids doctor trained in this country and in Switzerland where his interest in thyroid disease began. Returning to the United States just before the outbreak of World War I, he served with the Office of the Surgeon General experiencing the red-tape and frustrations of government service.

Doctor Hyland's interest in thyroid led him to cancer and surgery and he long ago was certified by the American Board of Surgery; both the American and the International College of Surgeons claim him as member.

MSMS President Hyland (1946)

Organization-wise, Doctor Hyland has come up through the ranks, hit the top, and there has

(Continued on Page 430)

Michigan State Medical Society

Annual Session of The Council

January 31—February 1, 1958

HIGHLIGHTS

- The Auditor's Report for the year 1957 and the budgets for 1958 were approved (see page 426).
- Annual Reports of the Secretary, Treasurer and Editor were presented, thoroughly discussed by Reference Committees, and approved.
  Reports of the three Standing Committees of The Council (County Societies, Finance, Publication) meetings of January 30, 1958, were accepted. The Council Commended the Publication Committee and Editor Wilfrid Haughey, M.D., for the national recognition being accorded JMSMS—a leader in the State Medical Journal field.
- Secretary L. Fernald Foster, M.D., Detroit; Treasurer Wm. A. Hyland, M.D., Grand Rapids; and Editor Wilfrid Haughey, M.D., Battle Creek, were re-elected for 1958.
- Progress Report on Michigan Medical Service was presented by MMS President L. Fernald Foster, M.D.
- Progress Report of Michigan Hospital Service was given by John B. Lord, President; and commented on by Wm. S. McNary, Vice-President, of Michigan's Blue Cross.
- Annual Reports of individual Councilors on the condition of the profession in their Districts were presented.
- Monthly Reports of Council Chairman D. Bruce Wiley, M.D., Utica; President George W. Slagle, M.D., Battle Creek; President-Elect G. B. Saltonstall, M.D., Charlevoix; Secretary L. Fernald Foster, M.D., Detroit; Speaker K. H. Johnson, M.D., Lansing, were presented and accepted.
- Committee on "Big Look": Chairman W. S. Jones, M.D., reported that the architectural associates, Yamasaki and Leinweber of Royal Oak, Michigan, had been selected to aid the Committee on Site in the selection of an appropriate location in the greater Lansing area for the new MSMS headquarters, and to design and erect said building.
- Beaumont Memorial: recent contributions to the new Beaumont Memorial Foundation from MSMS members totaled $2,600.00. A report on the January 30 meetings of the Beaumont Memorial Foundation Membership and of its Board of Directors was presented by BMF President Otto O. Beck, M.D., of Birmingham, who urged that all Michigan physicians become Life Members ($100.00) or Sustaining Members ($5.00 per annum) of the Foundation.
- Committee Reports were presented by: (1) Legislative Committee, meeting of January 23; (2) Committee on Blood Banks, December 14 (and minutes of North Central Blood Bank Committee, November 4); (3) Committee on Uniform Fee Schedule for Governmental Agencies, December 22; (4) Committee on Tuberculosis Control, January 8; (5) Medical Care Insurance Committee, January 18; (6) Industrial Health Committee, January 8; (7) Preventive Medicine Committee, January 9; (8) Committee on Closed Circuit Color Television for 1958 Michigan Clinical Institute, meeting of January 13; (9) Liaison Committee with the Michigan State Board of Registration in Medicine, January 15; (10) Michigan Cancer Co-ordinating Committee, January 23; (11) Medical Advisory Committee to Michigan Hospital Service, January 16; (12) Arbitration Committee, January 24; (13) Permanent Conference Committee, January 22; (14) Postgraduate Medical Education Committee, January 16; (15) Liaison Committee with Michigan Academy of General Practice, January 30; (16) Committee on Awards, January 31.

- J. J. Lightbody, M.D., Detroit (Vice Speaker of the MSMS House of Delegates), was authorized to furnish the MSMS field secretary's office in the new Wayne County Medical Society building.
- Appointments: (1) Mediation Committee (authorized by 1957 House of Delegates): L. R. Leader, M.D., Detroit, Chairman; D. R. Boyd, M.D., Muskegon; A. E. Gamon, M.D., Saginaw; Jack Hoogerhyde, M.D., Grand Rapids; E. B. Johnson, M.D., Allegan; David McTaggart, M.D., Flint; and R. W. Teed, M.D., Ann Arbor. (2) Special Committee on Committees (authorized by 1957 House of Delegates): G. W. Slagle, M.D., Chairman, Battle Creek; L. Fernald Foster, M.D., Detroit; K. H. Johnson, M.D., Lansing; G. B. Saltonstall, M.D., Charlevoix; and D. Bruce Wiley, M.D., Utica. (3) MSMS Representatives to Michigan Health Council: J. H. Meyer, M.D., was appointed as Delegate and E. S. Oldham, M.D., as Alternate Delegate to Michigan Health Council. (4) R. W. Bailey, M.D., of Ann Arbor, was appointed a member of the Child Welfare Committee (and also of the Sub-Committee on School Health Problems). (5) MSMS Representatives to Medicare re-negotiation meetings, Washington, D. C., March 10-11: D. Bruce Wiley, M.D., and B. M. Harris, M.D. (The Council instructed the Secretary to communicate with representatives of the various specialty and general practice groups, stating that MSMS will be glad to consider and review any specific alternations they may wish to recommend in the Fee Schedule; further that the 1958 Medicare negotiators be instructed to attempt to achieve the new Michigan Medical Service $5,000 Fee Schedule as a minimum base.) (6) MSMS Representative to Michigan State Board of Alcoholism: J. S. Rozan, M.D., of Lansing. (7) Representatives to meet with Michigan Society of Anesthesiologists: L. Fernald Foster, M.D., Chairman, B. M. Harris, M.D., and D. Bruce Wiley, M.D. (8) G. B. Saltonstall, M.D., was appointed to Big Look Committee. (9) Liaison Committee with Blue Cross re payments for pathology services: D. B. Wiley, M.D., Chairman, Utica; L. Fernald Foster, M.D., Detroit; R. L. Mainwaring, M.D., Dearborn; Ralph W. Shook, M.D., Kalamazoo; and Mr. J. C. Ketchum, Detroit. (10) National Conference on Rural Health, March 6-8: H. B. Zemmer, M.D., Lapeer, Chairman of MSMS Rural Medical Service Committee, was authorized to attend as official MSMS representative.
- Stream-lining work of three or four committees on fee schedules. The Council instructed that the committee on Uniform Fee Schedule for Governmental Agencies confine its activities to wards of the government and to indigents; and that a study committee be appointed by the Chair to study and make recommendations toward the consolidation of the various fee schedule committees now in operation (referred to special Committee on Committees).
- Telegram of congratulations to the University of Alabama and felicitations to Dr. Lawrence Reynolds, M.D., Detroit, on dedication of Lawrence Reynolds library at the University, was ordered.
- Meeting dates of The Council and of its Executive Committee for the year 1959 were approved (previously, the 1958 dates had been selected); also the date and place of the 1961 Annual Session of The Council and of the County Secretaries—Public Relations Seminar were confirmed.
- Non-participating Physicians in Michigan Medical Service: The following action of the 1957 MSMS House of Delegates was reviewed by The Council: "That Michigan Medical Service be urged to give consideration to the development of a means whereby a patient of a non-participating physician will be reimbursed by Michigan Medical Service in an amount not to exceed the fee called for in the contract fee schedule, unless the patient directs otherwise." The proposed change in the Michigan Medical Service contract, to effect the above direction, was thoroughly discussed and approved by The Council.

- Legal Counsel's Report: Lester P. Dodd presented opinions on (1) Sales tax on drugs purchased by physician; (2) Hospital audit of charts; (3) Religious beliefs in connection with blood transfusions (all opinions to be published in JMSMS).
- Public Relations Counsel's report included (1) Review of medical proposals before the Michigan Legislature; (2) Staff contact program, especially in Wayne County; (3) List of speakers before clubs and groups during 1958 MCI.
- Matters of mutual interest were presented by A. E. Heustis, M.D., Michigan Health Commissioner, including (1) Reiter's Syndrome; (2) Idiopathic thrombocytopenic purpura; (3) Hemophilia; (4) Leukemia and other forms of cancer in children; (5) Lung Cancer Research—which study was approved by The Council; (6) Radiation Rules and Regulations; (7) Poliomyelitis incidents—The Council requested an invitation to co-operate in any industrial injury study; (8) Tuberculosis Recommendations of 1958.
- The Suggested Constitution and By-Laws for County Medical Societies, as developed by the County Societies Committee (Wm. M. LeFevre, M.D., Muskegon, Chairman) was thoroughly discussed and approved by The Council.
- The Council approved co-operation with the institute on alcoholism being sponsored by the Michigan State Board of Alcoholism, to be held next autumn.
- Recognition of the Late J. Joseph Herbert's Work: H. H. Hiscock, M.D., Flint, recommended that reference be included in the next printing of the MSMS Constitution and By-Laws concerning the contribution of the late J. Joseph Herbert LL.B. (former MSMS Legal Counsel) in revising these By-Laws, particularly Chapter six and seven re mediation-ethics-grievance. A paragraph recognizing Mr. Herbert's work was authorized for publication on the inside cover of the newly printed Constitution By-Laws.

SECRETARY'S ANNUAL REPORT—1957

TO: The Council of the Michigan State Medical Society:

I herewith submit the annual report of the Secretary for the year 1957.

MEMBERSHIP

The Michigan State Medical Society membership for 1957 showed a total of 6,632 members including 75 Retired, 286 Life and Emeritus, 583 Associate-Military and 6 Honorary members. The total paid membership was 5,688 with net dues of $308,385.00. The 1957 membership was once again at the highest peak in the history of the Society. The number of members with unpaid dues for 1957 was only 28, the lowest in many years.

DEATHS DURING 1957

I must regretfully report a total of ninety eight deaths among members during the past year.

Allegan County—Olin H. Stuck, M.D., Otsego, Michigan.

Alpena County—Arthur L. Foley, M.D., Alpena; John W. Purdy, M.D., Alpena.

Bay County—George W. Moore, M.D., Bay City, Michigan.

Berrien County—Ruel N. Dunnington, M.D., Benton Harbor; Alvin J. Swingle, M.D., Benton Harbor, Michigan.

Branch County—Kendall B. Rees, M.D., Coldwater, Michigan.

Calhoun County—Charles W. Heald, M.D., Battle Creek; Awra A. Hoyt, M.D., Battle Creek, Michigan.

Chippewa County—John J. Blue, M.D., Cedarville; George A. Conrad, M.D., Sault Ste. Marie, Michigan.

Delta County—Harry John Definet, M.D., Escanaba, Michigan.

Genesee County—N. Arthur Gleason, M.D., Flint; Lafon Jones, M.D., Flint; Ray S. Moorish, M.D., Flint, Michigan.

Gogebic County—Augustus J. O'Brien, M.D., Ironwood; Henry A. Tressel, M.D., Wakefield, Michigan.

Grand Traverse County—Buell H. Van Leuven, M.D., Empire, Michigan.

Gratiot County—Frederick W. Palmer, M.D., Mt. Pleasant, Michigan.

Hillsdale County—Omer G. McFarland, M.D., North Adams, Michigan.

Houghton County—William T. King, M.D., Ahmeek; Melvin D. Roberts, M.D., Hancock, Michigan.

Ingham County—Karl B. Brucker, M.D., Lansing; William DeKleine, M.D., Buffalo, New York.

Ionia County—Lewis E. Bracey, M.D., Sheridan; Lee E. Kelsey, M.D., Lakeview.

Jackson County—Clyde A. Leonard, M.D., Jackson; Norman D. Wilson, M.D., Jackson, Michigan.

Kent County—Murray M. DeWar, M.D., Grand Rapids; Eugene L. Kendall, M.D., Grand Rapids; John G. Kingma, M.D., Grand Rapids; Wilfrid P. Patterson, M.D., Grand Rapids; George L. Riley, M.D., Grand Rapids; Ferris N. Smith, M.D., Grand Rapids; and Joseph B. Whinery, M.D., Grand Rapids, Michigan.

Lenawee County—Wesley H. Mast, M.D., Tecumseh, Michigan.

Macomb County—Henry C. Wellard, M.D., New Baltimore, Michigan.

Marquette County—Arvid W. Erickson, M.D., Ishpeming; George M. Waldie, M.D., Ishpeming, Michigan.

Mason County—Leo J. Goulet, M.D., Ludington, Michigan.

Muskegon County—John E. Vander Laan, M.D., Muskegon, Michigan.

Oakland County—J. W. Edwards, M.D., Ferndale; Clarence L. Hathaway, M.D., Royal Oak; John Norup, M.D., Berkley; and William W. Weisberg, M.D., Oak Park, Michigan.

Saginaw County—John N. Kemp, M.D., Saginaw; James Ware MacMeekin, M.D., Saginaw; Charles R. Murray, M.D., Saginaw; Frank A. Poole, M.D., Saginaw; and Michael D. Ryan, M.D., Saginaw, Michigan.

Washtenaw County—Roscoe Wm. Cavell, M.D., Ann Arbor; Frederick G. Novy, M.D., Ann Arbor; Sylvester J. O'Connor, M.D., Ann Arbor; Harvey Spencer, M.D., Ann Arbor; and William C. Wylie, M.D., Dexter, Michigan.

Wayne County—Bruce Anderson, M.D., Pontiac; Jerome W. Ankley, M.D., Detroit; Noah E. Aronstam, M.D., Detroit; Claud W. Behn, M.D., Detroit; Harvey F. Brown, M.D., Detroit; Constantine Cetlinski, M.D., Detroit; Robert P. Coseglia, M.D., Detroit; Douglas Ruthven Coyne, M.D., Detroit; Frederick S. Dickson, M.D., Detroit; Joseph M. Foley, M.D., Detroit; Daniel P. Foster, M.D., Detroit; William L. Foster, M.D., Detroit; Leonard Fox, M.D., Wyandotte; Herbert L. Goodman, M.D., Detroit; William H. Gordon, M.D., Detroit; Eugene V. Gourley, M.D., Detroit; Joshua Hanser, M.D., Detroit; Leland V. Hewitt, M.D., Detroit; John E. Hopkins, M.D., Detroit; John B. Horwitz, M.D., Detroit; Robert B. Kennedy, M.D., Detroit; Heinrich Kobrak, M.D., Detroit; John C. Koch, M.D., Detroit; Harry C. Kurtz, M.D., Grosse Pointe Park; Rudolf Leiser, M.D., Dearborn; Edward A. Malik, M.D., Detroit; Mark E. Maun, M.D., Detroit; Robert Joseph McClellan, M.D., Detroit; Harold G. McLean, M.D., Detroit; David H. O'Donnell, M.D., Detroit; Dayton H. O'Donnell, M.D., Detroit; Charles F. Pequegnot, M.D., Detroit; Ralph A. Poirier, M.D., Detroit; John J. Prendergast, M.D., Detroit; Carl S. Ratigan, M.D., Dearborn; George W. Robinson, M.D., Detroit; John N. Salowich, M.D., Allen Park; Robert L. Schorr, M.D., Detroit; Carlos W. Shotwell, M.D., Detroit; and Joseph J. Watts, M.D., Detroit, Michigan.

Wexford County—Augustus Holm, M.D., Moline, Illinois; Laurence E. Showalter, M.D., Cadillac, and William H. Stokes, M.D., Lake City, Michigan.

1957 ANNUAL SESSION

Once again the Annual Session was held in Grand Rapids and chalked up a fine registration of 3,235. The figure includes Doctors of Medicine, 1,540; Guests, 422; Exhibitors, 585; Woman's Auxiliary members, 284; and Medical Assistants Society members, 404. The General Assembly type of program with discussion conferences was continued as in past years, and the 132 technical exhibits and 11 scientific exhibits received the usual generous attention of the registrants.

ORGANIZATIONAL ACTIVITIES

MICHIGAN CLINICAL INSTITUTE

The Eleventh Michigan Clinical Institute was held in Detroit, March 13-15, 1957. Total registration was 2,243 and the Operating Room Nurses Conference was held in conjunction with the MCI again this past year, as well as a special conference for Residents, Interns and Senior Medical Students. Eight members of the Michigan State Medical Society who were Presidents of National medical associations received special awards at a luncheon held in their honor.

ANNUAL SECRETARIES-PUBLIC RELATIONS CONFERENCE

In 1957, the three day County Secretaries-Public Relations Seminar was again held in January 25-26-27 and attendance records were shattered with a total attendance of nearly 150 representing nearly every component County Medical Society in Michigan.

SECRETARY'S LETTERS

As part of the Society's general educational and informational program for individual members and for component County Societies there were issued during the year 1957 seven Secretary's Letters, three to all members and four to County Society Secretaries and keymen. These informational bulletins were in addition to the monthly issues of THE JOURNAL with its scientific articles and informative news items. In addition, thirteen Legislative Bulletins were issued to keymen during the 1957 Legislative Session to keep the membership informed of activities in the State Legislature pertaining to the practice of medicine.

COMMITTEES

Once again, time and space preclude the listing in detail of the many activities of all the committees contributing to the many splendid programs of the State Society. The accomplishments of the committees of the Society were achieved at the expense of many hours of personal sacrifice on the part of the personnel of the various committees. During 1957, a total of 103 meetings were held by the forty-eight committees of the Michigan State Medical Society. Practically every meeting was attended by your Executive Director or Secretary or some staff member.

A total of 579 members of your State Society gave freely of their time to attend these meetings and assist in the operational activities of the State Society. Too much commendation cannot be accorded the committee members who contributed their time and effort to develop and execute constructive programs—both scientific and economic for the public welfare and to maintain the position of leadership enjoyed by the Michigan State Medical Society in the field of progressive medical planning.

SPECIAL SESSION, HOUSE OF DELEGATES

April 27, 1957

In view of the demands being made upon our Prepayment Medical Care Plan consistent with our changing economy, a Special Session of the House of Delegates was called for April 27, 1957.

At this session a Public Opinion Survey of the attitudes of the public and the physicians was ordered made.

It was made an activity of the Executive Committee of The Council with Mr. Hugh W. Brenneman as Survey Director.

PUBLIC OPINION SURVEY

Opinion Study of Prepaid Medical Care Coverage in Michigan.—This monumental work, authorized by the House of Delegates in special session on April 27, 1957, is the most significant and largest study of its type ever conducted by a state medical society. A detailed report of the findings was presented to the House of Delegates by the Survey Committee (the members being the members of the Executive Committee of The Council) through their spokesmen, Drs. J. J. Lightbody, George W. Slagle, and Mr. H. W. Brenneman. National attention was focused on the results of the study by the medical profession, the public and the insurance companies. Proof of this was in the large number of distinguished guests on hand for the presentation of the results. Many state and national organizations were represented. They included important personages from insurance companies, health insurance advisory groups, other state medical societies and Blue Shield plans. In addition, editors and writers from the great journals of national and state professional societies are planning reports in the study as are science writers with established national audiences of readers.

FINANCES

An audit of the books of the Society was completed by Knostman & Smith as of November 30, 1957. This has been submitted to the Finance Committee for study and is available to any member of the Society for perusal at the Executive Office, 606 Townsend Street, Lansing, Michigan. A brief summary of the audit produces the following information:

Assets:	
Cash	$ 40,498.08
Accounts Receivable	21,180.92
Investments	270,455.28
Property & Equipment	51,642.28
Other Assets	5,521.77
Total Assets	$389,298.33
Liabilities:	
Accounts Payable	$ 21,888.29
Society Equities	
Reserved for Special Purposes:	
Public Education Reserve	$ 74,084.00
Public Education Program	40,765.04
Public Service Account	2,761.86
Professional Relations Account	4,423.70
Rheumatic Fever Control Program	12,679.95
Contingent Fund	53,614.34
Building Maintenance	16,983.53
New Headquarters Fund	28,135.00
General Society Equity	133,962.62
Total Liabilities & Equities	$389,298.33

THE JOURNAL

The following financial information relative to THE JOURNAL is found in the annual audit report of Knostman & Smith. Income was $113,116.06 which is $20,-341.06 over the tentative budget for 1957. Expenses were $100,704.24 which was $6,129.25 over the 1957 budget. However, this figure indicates a net gain for the year 1957 (eleven months) of $12,411.81.

Included in the total income of $113,116.06 was only $8,419.50 received from the allocation of membership dues.

1957 HOUSE OF DELEGATES

The 92nd Annual Session of the Michigan State Medical Society's House of Delegates was held in Grand Rapids, September 23-24-25, 1957.

The House of Delegates:

1. Adopted with thanks the President's Address, the President-Elect's Address, the report of Delegates to the American Medical Association, the Annual Report of the President of Woman's Auxiliary to Michigan State Medical Society, and the annual Report of the President of Michigan State Medical Assistants Society.

2. The Annual Reports of The Council (including the Annual Reports of Committees of The Council) were adopted as amended. This included approval of By-Laws amendments—to Chapter 6 and new Chapter 7—concerning mediation-ethics-grievance, as amended, with deletion of "representation by counsel." Action on The Council Reports also included approval of two of the four recommendations of the Committee on Study of Healing Arts, as follows:

(a) That the Michigan State Medical Society Delegates to the AMA House of Delegates be instructed to submit a resolution to the AMA House of Delegates at that body's next session, requesting the referral of the problem of M.D.'s and D.O.'s relationship to the individual constituent state medical societies for action by their individual houses of delegates, and that actions, subsequently taken on this question by these houses, be considered ethical in relation to the AMA Principles of Ethics.

(b) That the Michigan State Medical Society agree to having its Legislative Committee meet (annually) when necessary with the like committee of the Michigan Association of Osteopathic Physicians to attempt to iron out any mutual legislative problems.

3. Adopted Annual Reports of all Standing Committees and of all Special Committees of the Society; also the report of the Permanent Advisory Committee on Fees which was directed to continue its studies.

4. Elected Paul Van Riper, M.D., Champion, as Michigan's Foremost Family Physician for 1957.

5. Approved the MSMS-sponsored Opinion Study of Pre-paid Medical Care Coverage, including the Report of the Committee on Michigan Medical Service, G. W. Slagle, M.D., Chairman (see November JOURNAL for detailed report).

6. Approved the amended Report of the Committee to Study Comprehensive Pre-paid Insurance Plans, C. I. Owen, M.D., Chairman.

7. *Took action on proposed amendments to the Constitution and By-Laws, as follows:* (a) By-Laws, Chapter 6 and new Chapter 7 re mediation-ethics-grievance—approved as amended (supra, Item 2); (b) Constitution, Article X, Sections 1-2-3, and By-Laws, Chapter 9, Section 1, making Vice Speaker a voting member of The Council and its Executive Committee—approved; (c) Constitution, Article VII and By-Laws, Chapter 8, Section 1, giving representation in MSMS House of Delegates to Sections—referred to 1958 House of Delegates; (d) By-Laws, Chapter 2, Section 1 re regulation of membership—disapproved; (e) By-Laws, Chapter 6, re discipline of members—disapproved.

8. *Adopted resolutions concerning:* (a) Federated fund raising—approved in principle; (b) Honorary Membership to Wm. J. Burns, LL.B.; (c) Referral of healing arts problem to A.M.A.; (d) Expansion of medical school facilities; (e) Training of ambulance drivers; (f) Collection of MSMS dues; (g) Pilot Study of Insurance Reporting; (h) Woman's Auxiliary's sponsorship of Freedom Essay Contest; (i) Commendation to Luther R. Leader, M.D., Detroit; (j) Annual registration of M.D.'s (as amended); (k) Recognition of Pathology under Medicare; (l) Recognition of Pathology in Blue Cross-Blue Shield.

9. Referred to The Council a resolution re distribution of influenza vaccine.

10. Referred to Michigan Medical Service resolution re Increased Benefits in Michigan Medical Service contracts.

11. *Adopted substitute resolutions concerning:* (a) Establishment of full-time chairs of preventive medicine and public health in Michigan's medical schools; (b) Creation of Study Committee re Practice Privileges in Public Hospitals.

12. *Took no action on resolutions concerning:* (a) Free choice of physician in all medical service plans; (b) Creation of MSMS Advisory Committee to Michigan Medical Service; (c) Comprehensive medical service plan.

13. Tabled resolution concerning study of relative value schedule of services.

14. *Disapproved resolutions concerning:* (a) Proposed increase in dues for building fund (Thorup); (b) Proposed increase in dues for building fund (Babcock); (c) Merger of Blue Shield-Blue Cross; (d) Separation of Blue Cross-Blue Shield; (e) Creation of national or state clearing committee to investigate new drug claims; (f) Representation on Michigan Medical Service Board; (g) Inclusion of M.D.'s under Social Security; (h) Study of need for third medical school in Michigan; (i) Recommendation to Joint Accreditation Committee to establish new section on special services; (j) Adding physiatrists in present MSMS Radiology-Anesthesiology-Pathology Section; (k) Recognition of Internists; (l) To change MHS-MMS into Indemnity Plans; (m) Limit Blue Shield Contracts to those in Specified Income Limits.

15. *Elected the following Officers:*

(a) J. F. Beer, M.D., St. Clair, as Councilor of the 7th District (1962).

(b) E. S. Oldham, M.D., Breckenridge, as Councilor of the 8th District (1962).

(c) D. G. Pike, M.D., Traverse City, as Councilor of the 9th District (1962).

(d) O. J. Johnson, M.D., Bay City, as Councilor of the 10th District (1962).

(e) W. A. Hyland, M.D., Grand Rapids (1959); J. S.

DeTar, M.D., Milan (1959); and C. I. Owen, M. D., Detroit (1959), as Delegates to the American Medical Association.
(f) W. W. Babcock, M.D., Detroit (1959); E. F. Sladek, M.D., Traverse City (1959); and O. J. Johnson, M.D., Bay City (1959), as Alternate Delegates to the American Medical Association.
(g) G. B. Saltonstall, M.D., Traverse City, as President-Elect.
(h) K. H. Johnson, M.D., Lansing, as Speaker, House of Delegates.
(i) J. J. Lightbody, M.D., Detroit, as Vice Speaker, House of Delegates.

16. *Elected to Special Memberships:*

(a) *Forty-eight members to Life Membership:* (Allegan County) H. H. Johnson, M.D.; (Berrien County) Edward A. Miller, M.D.; (Gogebic County) Charles E. Stevens, M.D.; (Ingham County) J. Earl McIntyre, M.D.; (Ionia-Montcalm Counties) Earl P. Bunce, M.D.; Oscar P. Geib, M.D., Alfred E. Hollard, M.D., Perry C. Robertson, M.D.; (Kent County) Earle J. Byers, M.D., Ernest W. Dales, M.D., Alfred Dean, M.D., John Ver Meulen, M.D., William R. Vis, M.D.; (Lenawee County) W. B. Hornsby, M.D., Philip P. Sayre, M.D., Chad A. Van Dusen, M.D.; (Saginaw County) Alexander R. McKinney, M.D. and John T. Sample, M.D.; (Washtenaw County) Frederick A. Coller, M.D., Emory W. Sink, M.D.; (St. Clair County) George Van Rhee, M.D.; (Wayne County) Effie E. Arnold, M.D., T. H. Edward Best, M.D., F. W. Bramigk, M.D., Philip H. Broudo, M.D., Duncan Campbell, M.D., William J. Cassidy, M.D., Aaron L. Chapman, M.D., Don A. Cohoe, M.D., Ray S. Dixon, M.D., Clair L. Douglas, M.D., Edward F. Dowdle, M.D., Clarence H. Eisman, M.D., Ray L. Fellers, M.D., William Gramley, M.D., Charles W. Husband, M.D., Zeno L. Kaminski, M.D., Charles S. Kennedy, M.D., Hugh A. McFadyen, M.D., Edward J. O'Brien, M.D., Jacob R. Rupp, M.D., Rene J. St. Louis, M.D., Stelios N. Sakorraphos, M.D., Simon H. Sauter, M.D., Jesse G. Slaugenhaupt, M.D., Elisha J. Tamblyn, M.D., Delma F. Thomas, M.D., and Harriet E. McLane, M.D.
(b) *Eleven members to Retired Membership:* (Oakland County) Burton M. Mitchell, M.D.; (Wayne County) Roland M. Athay, M.D., Carl C. Birkelo, M.D., Harry G. Clark, M.D., Floyd B. Knapp, M.D., Arlington Lecklider, M.D., Walter H. Squires, M.D., Hugh Stalker, M.D., Henry B. Steinbach, M.D., Cleary N. Swanson, M.D., William A. Thompson, M.D.
(c) *Fifty-eight members to Associate Membership:* (Alpena County) Jerry Miller, M.D.; (Chippewa-Mackinac Counties) LeRoy A. Futterer, M.D.; (Hillsdale County) William O. Michel, M.D.; (Gratiot County) LeRoy F. Von Lackum, M.D.; (Oakland County) Juliette Seelye Karow, M.D.; (Washtenaw County) John N. Bicknell, M.D., George E. Block, M.D., Fred G. Blum, Jr., M.D., Philip D. Brooks, M.D., Donald C. Bullington, M.D., Charles W. Butler, Jr., M.D., C. William Castor, Jr., M.D, William A. Challener, III, M.D., George W. Cheek, Jr., M.D., Alton J. Coppridge, M.D., William M. Cutler, M.D., James H. Geist, M.D., Robert I. Goldsmith, M.D., Carol E. Goodman, M.D., Frank H. Goodrich, M.D., Donald J. Holmes, M.D., Albert S. Jacknow, M.D., Robert S. Jampel, M.D., Edmund M. Krigbaum, M.D., Graydon A. Long, M.D., John C. Nixon, M.D., Gerald A. O'Connor, M.D., Alden R. Parker, M.D., Prasanna K. Pati, M.D., Gus A. Raney, M.D., Melvin J. Reinhart, M.D., F. Dale Roth, M.D., Arthur S. Shufro, M.D., Carlson R. Speck, M.D., Donald Y. Stewart, M.D., Thomas P. Stratford, M.D., Emanuel Tanay, M.D., Ralph W. Theobald, M.D., Robert L. Timmons, M.D., John B. Tisserand, Jr., M.D., John S. Tytus, M.D., John D. Werley, M.D., Donald K. Williams, M.D., James H. Winkler, M.D., James A. Wood, M.D., William S. Wilson, M.D.; (Wayne County) Donald R. Brock, M.D., Paul Dzul, M.D., David French, M.D., Eugene P. Frenkel, M.D., Alex Gaynor, M.D., Frank L. Hoagland, M.D., L. W. Hull, M.D., William V. Kyle, M.D., Charles West, M.D., John D. McKinnon, M.D., Donald R. Nielson, M.D., and Melvin K. Pastorius, M.D.

OTHER ORGANIZATIONAL ACTIVITIES

WOMAN'S AUXILIARY AND MEDICAL ASSISTANTS

The Woman's Auxiliary and the Medical Assistants have maintained active programs throughout the year.

CONTACT WITH GOVERNMENTAL AGENCIES AND CONTACTS WITH VOLUNTARY AGENCIES AND ORGANIZATIONS

The usual contacts have been made from time to time during the year.

MICHIGAN MEDICAL SERVICE

Financial.—Final figures for the year 1957 are not available as of this date.

The Tentative Balance Sheet as of November 30 indicates:

	1957	*1956*
Assets	$13,840,030.79	$15,931,562.81
Liabilities	10,632,501.50	9,742,510.16
Reserve for Contingencies of	$ 3,207,529.29	$ 6,189,052.65

The Assets as of December 31, 1956 were $15,378,-309.08 or a decrease for the eleven months of $1,538,-278.29.

The Reserve for Contingencies as of December 31, 1956 was $5,812,312.60 or a reduction of the Reserve for the eleven months of $2,604,783.31.

This decrease in Reserve for Contingencies was allocated as follows:

	11 Months 1957	*11 Months 1956*
Loss from Operations	$2,919,402.54	$2,197,610.13
Miscellaneous Income (Gain)	(18,690.90)	(2,539.85)
Investment Income (Gain)	(295,928.33)	(326,381.06)
Total Loss	$2,604,783.31	$1,868,689.22

It is estimated that the subscription fee income for the year 1957 and payments for services rendered subscribers will be as follows:

Estimate of subscription fee income for 1957	$45,759,000.00
VA fees and expense reimbursement	1,082,000.00
Medicare fees and expense reimbursement	536,000.00
	$47,377,000.00
Estimate of payments for services rendered subscribers for the year	$43,836,000.00
For veterans	956,000.00
Medicare	525,000.00
Etimated total payments	$45,317,000.00

This is an average per month of $3,776,400.00 as compared with $3,493,000.00 in 1956.

The dollar of subscription income is divided approximately in cents as follows:

	1957	*1956*	*1955*	*1954*	*1953*
Services to Subscribers	98.54c	97.78c	91.34c	90.66c	89.82c
Administration Expense	8.48	7.80	8.68	8.83	8.66
Reserve for Contingencies (Loss)	(7.02)	(5.58)	(.02)	.51	1.52

The decrease in reserve for contingencies of $2,604,-783.31 for the eleven months of 1957 resulted from increase in services under all contracts except the Surgical $5,000.00 Family Income Certificate. Subscription rates were increased overall by 12% effective October 1, 1958. The effect of this increase for two months is reflected in the corporation's net loss above. The loss would have been greater had there been no increase.

Payments for Services.—There is an increase in incidence of service for the first six months of 1957. Services per 1,000 subscribers are as follows:

	1957	*1956*	*1955*	*1954*	*1953*
First six months	28.46	26.70	23.93	22.94	23.31
Average cost per service is as follows:					
First six months	$35.69	$35.36	$32.74	$33.25	$32.74

The increase in incidence of service in the first six months of 1957 over the same period for 1956 as compared to the increase in 1956 over 1955 is due to large increase in enrollment under the medical-surgical type of certificates and greater utilization of all services.

During the year 1957, payments were made for 1,208,436 services under our basic contracts. In addition there were 99,533 payments under our X-Ray-EKG Rider.

Enrollment.—November 30, 1957 statistics indicate there were 3,636,912 persons protected by Blue Shield in Michigan and of that number 1,899,634 (52.2 per cent) had the X-Ray-EKG Rider.

789,264 (21.7 per cent) persons have surgical protection only
2,847,648 (78.3 per cent) persons have both medical and surgical coverage
1,505,115 (41.4 per cent) persons have the $2,500 family income contract
2,131,797 (58.6 per cent) have the $5,000 family income contract

Professional Relations Activities for 1957.—

I. *Contacts by the Professional Relations Staff for 1957:*

Doctor Contacts:		
In Office	8,995	
Hospital Cloakroom	4,126	
Other	4,266	17,387
Miscellaneous Contacts:		
Hospital and Clinic	1,313	
At Meetings	1,050	
Secretaries	2,511	
District Offices, Subscribers, etc.	2,041	6,915
Meetings:		
Hospital Cloakroom	259	
County Society	134	
Medical Assistants	26	
Hospital Staff	66	
Others	136	621

II. *Report of M.D. Participation Activity for 1957:*

		1956
New doctors entered practice	392	
New doctors signed participation agreement	227	
New doctors who did not sign participation agreement	165	
Doctors already practicing who signed participating agreements	280	
TOTAL PARTICIPATING AGREEMENTS OBTAINED	507	346
M.D.'s left State	63	33
M.D.'s retired	31	
M.D.'s deceased	83	85
M.D.'s moved; whereabouts unknown	32	37
M.D.'s in Military Service	7	39
M.D.'s resigned participation	37	30
TOTAL LOSS OF PARTICIPATING DOCTORS, ALL SOURCES	253	224
NET GAIN OF PARTICIPATING DOCTORS	254	122

NOTE: The above activities are exclusive of Medical Meetings attended by L. Fernald Foster, M.D., Jay C. Ketchum, C. D. Moll, M.D., L. G. Goodrich and staff personnel other than the Professional Relations people.

III. *Total Physician Participation in Michigan Medical Service:*

As of December 25, 1957, total participants were 5,106 out of approximately 6,034 Doctors of Medicine for an 84.6 per cent enrollment.

Two participation campaigns contributed substantially to the above total.

1. The letter from Luther R. Leader, M.D., President of the Wayne County Medical Society, to all Wayne County members brought in 130 new participants.
2. A later letter to all Michigan State Medical Society members from Arch Walls, M.D., President, brought in an additional 85 new participants.

IV. *Other Professional Relations Activity:*

1. In 1957, the Wayne County Medical Advisory Board to Michigan Medical Service held twenty-two meetings and adjudicated fees for approximately 2,200 cases of unusual and complex nature.
2. The Kent County Medical Advisory Board to Michigan Medical Service held ten meetings in 1957 and adjudicated fees for approximately 350 cases of unusual and complex nature.
3. Michigan Medical Service representatives attended and participated in seventeen hospital staff meetings in the Detroit area which were arranged by the Michigan State Medical Society and the Wayne County Medical Society as joint presentations of programs relative to the current activities of both organizations.
4. Michigan Medical Service Professional Relations representatives have made appreciable progress in their relationships with County Medical Societies. Out of the fifty-five County Medical Societies in the State, our representatives attend the regular meetings of thirty-one of them as associate members or because of standing invitations from the Societies to the representatives..
5. The Professional Relations activities in the past year are inclusive of numerous contacts with the liaison committees of the Michigan Osteopathic Association, the Michigan Chiropody Association and the Society of Oral Surgeons.
6. The Professional Relations staff has been called on for considerable assistance and education of the Medical Profession with regard to the newly organized Medicare Program. As this is a new activity of Michigan Medical Service, a great deal of time has been devoted to it to help make it run smoothly. It is estimated that about 25 per cent of the time of our representatives is taken up with this program.
7. There have been approximately 150 overcharge cases of under income subscribers presented to Michigan Medical Service in the last twelve months which required handling by our Professional Relations staff. It is a pleasure to report that all of these cases which came to our attention as disputes between patients and their doctors with respect to fees, for the most part, were settled amicably and successfully to the interest of both parties.

Medicare Program through December 31, 1957.—The Medicare Program has now been in operation thirteen months. When the contract was executed between the Defense Department and Michigan Medical Service as Fiscal Agent for the Michigan State Medical Society, estimates led us to believe we might expect to receive fifteen or twenty claims a week. Actually, since July 1, 1957, we are averaging *925* new claims per month.

Payments to the physicians amounted to *$525,143.48* in benefits for services covered under Public Law 569. We average *801* claims paid and *forty* claims denied per month. (Since July 1, 1957). The average pay-

ment for each claim is *$74.34* which is slightly higher than the national average for other plans throughout the country.

First six months of 1957 payments were for the following type of service:

Obstetrics	46%
T & A	9%
Complications of Pregnancy	6%
Balance	39%

Not only has the Program grown in size claimwise but the interest shown by the physicians has shown a marked increase. A year ago 3,106 Doctors of Medicine and 495 Osteopathic Physicians had signed participating agreements with Medicare. As of December 23, 1957, these figures have grown to *3,992* M.D.'s and *658* D.O.'s. It is important to note the difference between a participating doctor in Michigan Medical Service and Medicare. Under Medicare, a physician who does not participate in the program will not be paid, nor will the government assume any liability as an indemnity to aid the patient. This is a full-service program with no half way measures as far as participation is concerned.

The $5,000 income limit schedule was negotiated by the Medical Society as a reasonable fee schedule since according to the Department of Defense these service people annually average about $4,500 overall. Another striking difference between Medicare and Michigan Medical Service should be pointed out with respect to this fee schedule. A surgical fee as listed in the Medicare schedule contemplates complete payment for *all* necessary and normal pre and post operative care both in the hospital and in the doctor's office. Under Michigan Medical Service's regular program, the surgical fee contemplates no payment for the office care. This situation has caused some unfortunate misunderstandings within the profession.

We believe this problem will be eliminated in our renegotiations with the Defense Department which are scheduled for March 10, 1958. Already the Fee Schedule Committee for Governmental Agencies has been acquainted with a new method of breakdown of these basic fees to denote what portion of the fee is intended for pre operative care, post operative care, and the surgery itself. Likewise the government has attempted to better define the extent of pre operative and post operative services.

In May and again in October, Michigan Medical Service mailed to all doctors literature explaining or clarifying difficult parts of the program. The October mailing included a complete new up to date Medicare Manual with complete fee schedule. Our Professional Relations Department representatives are continually carrying "the word" to the Profession through direct contacts in the field.

The problem of properly identifying a serviceman's dependent has been made much easier. Practically all dependents over age 10 have now been issued a "Uniformed Services Identification and Privilege Card—DD Form 1173" which they must present to their physician at time of service. All claims submitted to Michigan Medical Service on and after January 1, 1958, must bear the Medical Authorization Card number and its expiration date.

As far as the claim form is concerned, there was hope that a revision would be available by the first of this year. Although experience shows that most doctors' offices are becoming more proficient in its use, improperly completed forms still is the chief reason for delay in payments. The Defense Department reports that an improved claim form should be available about next June.

Veterans Hometown Care Program.—The contract with the Veterans Administration effective July 1, 1957, provided for quite a few changes in administrative, authorization and payment procedures. Whereas prior to July 1, a new authorization had to be requested each month in each instance, the Veterans Administration employed the following procedural changes in authorizing.

Veterans, from the standpoint of outpatient treatment, were categorized into one of two groups, either "long term or short term."

Long Term—Veterans whose service connected disabilities were of a chronic nature and required almost continuous care were placed in this category. It provides for the issuing of one (1) authorization for a maximum of one full fiscal year, or as many months remaining in any fiscal year. This eliminates the necessity of having to request a renewal authorization for each month's treatment. Along with the authorization the treating physician would receive one invoice for each month of authorization, and four quarterly Report of Medical Treatment forms. The invoices are to be submitted to Michigan Medical Service one at a time for each month's treatment and for subsequent payment. The quarterly report forms must be submitted directly to the Veterans Administration and preferably prior to the receipt of the invoice for the third month of each quarter. At the present time the majority of Veterans Administration beneficiaries are within this category.

Short Term—Authorization issued within this classification are for periods of one to two months and are for veterans whose service connected disabilities do not require continuous care. Along with the authorization, which is sent directly to the veteran the first time, and then to the requesting physician thereafter, the Veterans Administration sends a progress report form, one invoice for each month, up to two, and one "request to continue treatment" form. At the end of the month the invoice should be submitted to Michigan Medical Service for payment, progress report direct to the Veterans Administration and request to continue treatment also to the Veterans Administration, if treatment for the following month is necessary.

Along with the authorizing procedure, the method of making payment to fee-basis physicians has been changed. Prior to July 1, 1957, payment was made by Michigan Medical Service upon approval of the doctors report, and as quickly as the report-invoice could be worked in the IBM cut-off procedure. Under the current procedure it is necessary to bill the Veterans Administration first and wait for payment from them before Michigan Medical Service can make payment to the doctor. This results in an additional delay of from 10-20 days. Even after receiving payment from the Veterans Administration we must wait until our next payment cycle before paying the doctor.

Except for the months of July and August, 1957, there have been comparatively few new long term authorizations, as a matter of fact only about 150 per month. "Short Term" authorizations have not exceeded an average of 1,500 per month. Currently the Veterans Administration is engaged in a re-classification program, and are changing many cases from "Long Term" to "Short Term." At the beginning of the contract year many veterans, for the sake of expediency, were classified "long term" but are now being changed back to "short term." Compared to an average of 5,500 to 6,000 authorizations per month prior to July 1, 1957, there is no definite reduction in overall authorizations. For example, there were 3,012 long terms in July and 1,614 in August, plus all the short term with averages around 1,500 per month.

Administrative costs have naturally decreased, however, not as much as the Veterans Administration had expected. Under the previous procedure administrative costs were approximately $6,700.00 per month whereas the lowest since July, 1957, was November, 1957, which was $3,707.95.

BLUE SHIELD FACT SHEET

September 30, 1957

I. Total Blue Shield Membership 40,686,426

II. Blue Shield Members in United States, Puerto Rico and Hawaii 38,843,522
Per cent of total population in United States, Puerto Rico and Hawaii 23.12

III. Blue Shield Members in Canada 1,842,904
Per cent of total population in Canada enrolled in Blue Shield 11.54

IV. States in which more than 40 per cent of the population are Blue Shield members:

State	*Per Cent*
Delaware	62.90
District of Columbia	56.78
Michigan	48.63
Connecticut	46.61
Massachusetts	42.60

States in which 20 per cent to 40 per cent of the population are Blue Shield members:

State	*Per Cent*	*State*	*Per Cent*
New York	39.76	Ohio	24.73
New Hampshire-Vermont	39.53	Kansas	24.50
Pennsylvania	35.91	Iowa	22.67
Colorado	32.38	Maine	22.57
Indiana	31.37	North Dakota	22.39
New Jersey	31.11	Wisconsin	22.14
Hawaii	30.11	Alabama	20.81
Minnesota	26.56	Missouri	20.45

Per cent of population enrolled in Blue Shield in areas served by Canadian Plans:

Province	*Per Cent*	*Province*	*Per Cent*
Manitoba	32.79	Maritime Prov.	14.35
British Columbia	28.85	Ontario	14.01
Saskatchewan	24.71		

V. Growth of Blue Shield Medical Care Plans:

December 31	*Total Members*
1946	1,826,719
1947	5,791,175
1948	8,911,225
1949	12,260,045
1950	16,629,596
1951	21,130,996
1952	24,670,701
1953	28,141,727
1954	31,489,023
1955	35,725,533
1956	38,802,846
September 30	
1957	40,686,426

Blue Shield Medical Care Plans are now in operation in forty-three of the forty-eight states, in the District of Columbia, in eight Canadian Provinces, and in the Territories of Puerto Rico and Hawaii. The Direct writings of Medical Indemnity of America, Inc., are also included.

VI. Percentage Distribution of Total Income Dollar:

Reporting Plans	*Medical and/or Surgical Expense*	*Operating Expense*	*Reserve Funds*
1947—45 Plans	78.24	15.60	6.16
1948—57 Plans	77.19	14.26	8.55
1949—61 Plans	78.99	13.88	7.13
1950—68 Plans	78.51	13.05	8.44
1951—75 Plans	79.63	12.39	7.98
1952—75 Plans	79.29	11.89	8.82
1953—76 Plans	80.30	11.24	8.46
1954—76 Plans	81.15	11.10	7.75
1955—75 Plans	82.75	10.63	6.62
1956—72 Plans	86.06	10.47	3.47
First Nine Months			
1957—73 Plans	87.93	10.24	1.83

Year	*Payments to Doctors*	*% of Total Earned Sub. Income*	*Operating Expense*	*% of Total Earned Sub. Income*
1955 United States, Puerto Rico and Hawaii	$331,067,785	82.81	$43,610,345	10.91
Canada	25,880,141	96.67	2,228,880	8.32
Total	356,947,926	83.68	45,839,225	10.75
1956 United States, Puerto Rico and Hawaii	$407,350,023	86.36	$50,702,153	10.77
Canada	31,237,425	93.14	2,647,650	7.92
Total	438,587,448	87.02	53,349,803	10.58
First Nine Months 1957 United States, Puerto Rico and Hawaii	$354,779,356	88.53	$42,232,077	10.54
Canada	27,863,618	93.14	2,330,720	7.79
Total	382,642,974	88.85	44,562,797	10.35

VIII. Miscellaneous Facts:
1. 12,068 persons joined Blue Shield each working day during 1956.
2. 3,077,313 persons became Blue Shield members during 1956.

Includes direct writing of HSI-MIA.

BEAUMONT MEMORIAL FOUNDATION

Following the approval of last year's House of Delegates, The Council requested the Beaumont Memorial Committee and Legal Counsel, Lester P. Dodd, to proceed with the incorporation of the Beaumont Memorial Foundation, a nonprofit corporation in the State of Michigan. This has been substantially accomplished and every MSMS member has been formally invited to participate in the Foundation created to further the purposes and continuing needs of the Beaumont Memorial. Thus every Michigan physician will know that he is not only eligible to join the Beaumont Memorial Foundation at an annual membership fee, but that it is his privilege to continue the up-keep of this historical gem which belongs to all members of the medical profession and should be the financial responsibility of all.

Alfred H. Whittaker, M.D., of Detroit, was recently appointed as a member of the Mackinac Island State Park Commission by Governor Williams—the first M.D. to be placed on this important Commission.

PUBLIC RELATIONS

During the last twelve months, Michigan medicine executed its most positive public relations campaign of the year when it conducted the Opinion Study of Prepaid Medical Care Coverage in Michigan.

Michigan State Medical Society Study.—In April, at a special meeting of the Michigan State Medical Society House of Delegates, instruction was given to institute a comprehensive survey of public opinion regarding medical service plans. With the responsibility vested in the Executive Committee of The Council and the administration under the direction of Public Relations Counsel Hugh W. Brenneman, the monumental task was geared to a break-neck schedule. Within four months, the three-party study was completed, tabulated, evaluated and prepared for presentation to the September meeting of the House of Delegates in Grand Rapids.

The Study, unanimously approved by the Delegates, served as a constant guide and reference to the House of Delegates Reference Committee on Medical Service and Prepayment Plans chaired by Max L. Lichter, M.D. Based on the Study results, the recommendations of the House of Delegates Committee to Study Comprehensive Prepaid Insurance Plans, and The Council Committee on Michigan Medical Service, recommendations for expanding the scope of prepayment coverage were adopted.

The attention of the entire nation was focused on Grand Rapids and the actions of the Michigan State Medical Society. Insurance companies, foundations, state medical societies and health organizations sent personal representatives to receive the information at first hand. Press interest was overwhelming during and after the House of Delegates session.

The public relations impact of the MSMS action was the end result of a four-month publicity schedule planned in advance, building gradually to a climax when study results were released in September.

The publicity theme was that the doctors and the public were partners in all health insurance plans, and for the first time anywhere, the public was being con-

sulted by Michigan doctors concerning its desires in medical-surgical coverage.

No medium was overlooked. Radio, television, press, magazines, trade journals, letters to organizations, exhibits, bulletin board announcements, and telegrams to hospital chiefs of staff, all urged participation in the survey. The result was that by the time the Study was reported in September, everybody in Michigan knew that the doctors, in partnership with the people, were doing something about medical coverage and costs.

The best defense is a good offense, and the Michigan State Medical Society took full advantage of its opportunity to gain public confidence in the doctors of medicine and prepayment principles.

Motion Pictures.—Michigan State Medical Society activities in motion picture production for 1957 resulted in the completion of one film and in the beginning of another.

A 15-minute colored film entitled, "Something Called Epilepsy," was finished in mid-year and had its statewide premier a few weeks ago in co-operation with the Michigan Epilepsy Center. This picture marks the first attempt of MSMS to enter the disease field with its educational efforts. Previous films have covered such subjects as the quality of M.D. training, medical associate recruitment., medical progress in immunization, etc.

With The Council's advice, shooting on the documentary film of the Wayne County Medical Society's new building has begun. Completion of the film is planned just prior to the dedication of the new headquarters so that the transition from the David Whitney House may be exhibited at the dedication ceremonies next September and preserved as an official record by Wayne County Medical Society.

Hospital Visitation Program.—To increase communication between medical societies and members, the MSMS co-operated with the Wayne County Medical Society in a series of more than 20 meetings with staffs of hospitals in Wayne County. The meetings were attended by officers of Wayne County Medical Society and Michigan State Medical Society officials, and provided an opportunity for a mutual exchange of ideas and information. This program is intended as an annual one and is specifically designed for a large county society not able to have all its members meet at any one time.

Library.—The new service to MSMS members and county societies is the MSMS Library, now fully catalogued under the direction of a professional librarian on loan from the Michigan State Library.

Requests are coming in now for loan of the resource material—films, tapes, scripts, clippings and background material on all socio-medical subjects. Every effort will be made to urge all MSMS members to make maximum use of this new educational and public relations asset.

Educational Campaigns.—"Operation Armor," the MSMS educational campaign to encourage immunization was concluded this past spring. This successful effort was the doctors' admonition to the public that immunization procedures were vital to disease prevention. The campaign was prompted by public apathy to polio and diphtheria vaccine.

National Medical Education Week and Diabetes Week also were promoted by MSMS which served as statewide coordinator and handled publicity in support of county medical society activities in these fields.

Radio-Television.—In radio, MSMS continued its activities in distributing to Michigan outlets, in co-operation with county medical societies, the 15-minute health series transcribed by the American Medical Association. It also continued to distribute its own "Tell Me, Doctor" five-minute series within Michigan. The latter shows have been screened for content and brought up-to-date in line with modern medical developments.

Special television programs were presented during 1957, in addition to regular shows over WKAR-TV, Lansing. The audience for the live TV broadcast of the heart operation performed during the Michigan Clinical Institute was the largest accorded any comparable program during 1957. MSMS co-operated with the Michigan Heart Association and Smith, Kline and French Laboratories to make a kinesscope of that hour-long show and distributed it to out-state TV stations after its initial telecast over WWJ-TV.

General Activities.—The pace of public relations activity increased markedly during 1957, principally because the conduct of the Opinion Study and the new Library were added to regular established duties.

For example, the Public Relations staff traveled in the aggregate some 58,000 miles and attended more than 600 meetings such as county medical society and committee meetings, conferences and business contacts, during the 12-month period.

Last year, the legislature was in session a total of 96 days necessitating the attendance of one or more men at each day and evening session. Combined with routine duties of publicity, program preparation for MSMS meetings, bulletins and so on, it is obvious that the medical profession's public relations function is a consuming task.

For 1958, an equal performance will be expected. Although the legislative session will not be as lengthy as in 1957, other programs will absorb this time slack.

Specifically, I refer to the MSMS participation campaign directed to doctors of medicine who are members of our Society. We hope, perhaps optimistically, that we will be able to obtain 99 and 44/100 per cent participation of our members in support of the prepayment principles developed and approved by the House of Delegates in September.

This has been a crucial year, but we have met its challenge. For 1958, we must do no less.

LEGISLATION

There may have been a time in the dim past when medicine and politics did not mix. Social and economic developments in more recent years, however, have forced the mantle of politics upon our collective shoulders. Even as we must do our utmost to "treat human ailments and disease," so must we also extend our every effort to aid legislative leaders in formulating the legal safeguards which insure for the people of the state the best health care possible.

A complete report on the 1957 Michigan Legislature and national Congress is to be found in last year's mid-summer report of The Council and is not repeated here. To quote a part of that report though, it is a tribute to the counsel of the members of the profession and the wisdom of the lawmakers that no legislation inimical to the public interest was passed during the session; some progress toward better health care was gained by the adoption of a half-dozen new laws.

Even more important, however, is the task ahead. Legislative proposals pertaining to the relationship between hospitals and the profession, the reorganization of the health agencies of the state, changes in the medical practice act, the control of atomic materials, the expansion of the medical school facilities of the state and changes in the federal social security law, to mention but a few, will be under consideration soon.

Since nearly a hundred bills in each session affect the health care of the people of the state, any future progress will depend entirely on the amount of responsibility the doctors of medicine assume in the political and socio-economic sphere.

RECOMMENDATIONS

After a careful consideration of the continued successful operation of the MSMS and its many projects, I respectfully submit the following recommendations:

1. That a survey be made by an outside agency of

the MSMS bookkeeping system, with a view to improving the records and making them more simplified.

2. That consistent with the suggestion of the House of Delegates—The Council develop educational programs covering all phases of Prepared Medical Care Insurance.

3. That in view of the growing need of an affiliation of the various professions, the Public Relations Counsel be empowered to proceed with the development of a Michigan Association of the Professions.

4. That if the 1958 Annual Session's new format (Tuesday noon to Friday noon) proves popular with the membership and results in increased M.D. attendance, I recommend that the 1959 Michigan Clinical Institute have the same Tuesday noon to Friday noon format.

5. That if the Editorial Workshop of February 1, 1958, is successful in attendance and county bulletin editor interest, I recommend that it be held every two years (in the same year as the State Medical Journal Advertising Bureau holds its Editorial Conference, to benefit from some of the program presentations and information at this National Conference).

Your Secretary is grateful for the helpful co-operation given him by this Council during the past year.

Too much recommendation cannot be accorded the Executive Office staff for their untiring efforts and loyalty to the Michigan State Medical Society.

Your Secretary is especially appreciative of the constructive advice and services accorded him by William J. Burns, Executive Director, Mr. Dodd, Legal Counsel, Hugh Brenneman, Public Relations Counsel and his staff, Wilfrid Haughey, M.D., Editor, and Robert Roney, Assistant Executive Director. Our field secretaries did an unusual job in their legislative activities.

To everyone who has aided so generously and willingly in the discharge of his duties, your Secretary is most grateful.

Respectfully submitted,

L. FERNALD FOSTER, M.D.
Secretary

TREASURER'S ANNUAL REPORT—1957

Mr. Chairman and members of The Council of the Michigan State Medical Society and the Finance Committee:

I hereby submit a report of the securities and cash belonging to the Michigan State Medical Society in my possession as duly elected Treasurer for the year January 1, 1957 to November 30, 1957:

Balance on hand as of January 1, 1957		$ 8,713.01
Deposits:	February 1	375.00
	March 1	62.50
	March 19	203.55
	April 11	235.00
	May 15	437.50
		62.50
	May 22	312.50
	June 12	621.00
	June 22	281.25
	July 3	55.20
	July 24	71.40
	Aug. 30	375.00
	Sept. 19	125.00
	Sept. 30	772.50
	Oct. 10	1,657.29
	Nov. 13	325.00
	Nov. 16	437.50
Total of Deposits		$ 6,409.69
Balance on hand as of November 30, 1957		$15,122.70

NOTE: *For the benefit of the Finance Committee, the Treasurer's account does not have that total on hand, as during December $10,000.00 was sent to the General fund in Lansing. In January 1958 $6,000.00 was sent to the General fund in Lansing, some of which was deposited in December 1957. Therefore the balance to date is $392.65. This is not a part of the report, but it is offered as general information.*

Mr. Slattery has checked the lock box and has notified Knostman and Smith as to the following securities, which are present at this time:

Michigan National Bank safekeeping receipt No. 4378 covering $25,000 US Treasury 2½% Bonds due Nov. 15, 1961. Securities held in The First National Bank of Chicago, Nos. 37849, 142208/9.

Michigan National Bank safekeeping receipt No. 4536 covering $35,000 US Treasury 2½% Bonds due Nov. 15, 1961. Nos. 89532, 122422, 123809, and 34239.

Michigan National Bank, Lansing, Mich., safekeeping receipt No. A 718 for $45,000 US Saving Bonds, Series K
$40,000 dated June 1, 1954
$ 5,000 dated June 1, 1954
Nos. Y54-843K/46K, V49, 459K.

Michigan National Bank, Lansing safekeeping receipt No. A 726 and No. A 86793. The First National Bank Chicago, US Treas. 2½% Bonds due Mar. 15, 1970/65 No. 30720, $10,000.

Michigan National Bank, Lansing safekeeping receipt No. A 864 and No. A 105141. The First National Bank of Chicago $25,000 US Treas. 2¼% Bonds due June 15, 1962/59 Nos. 79552, 161186, 179363.

$15,000 Savings Deposit Receipts date Oct. 24, 1957. Nos. 1160/2 reg. n/o Michigan State Medical Society.

$40,000 Time Cert. of Deposit dated Mar. 13, 1957, No. 644 reg. n/o Michigan State Medical Society.

$25,000 Time Cert. of Deposit dated Oct. 7, 1957, No. 1737 reg. n/o Michigan State Medical Society.

$4,000 US Savings Bonds Series K, dated July 1, 1954, reg. n/o Michigan State Medical Society Nos. M262-323K/6K.

$5,000 US Savings Bonds Series G, dated May 1, 1946, reg. n/o Michigan State Medical Society, Nos. M4-733-323G/7G.

$30,000 US Savings Bonds Series G, dated Aug. 1, 1946, reg. n/o Michigan State Medical Society, Nos. V543-383G/8G.

$5,000 US Savings Bond, Series G, dated Mar. 1, 1948. No. V799-030G, reg. h/o Michigan State Medical Society.

$8,000 US 2¼% Treas. Bonds, Investment Series B 1975-80, reg. n/o Michigan State Medical Society, Nos. 17469K, 70L, 71A, 72B, 73C, 74D, 75E, and 76E.

Respectfully submitted,

WILLIAM A. HYLAND, M.D.
Treasurer

EDITOR'S ANNUAL REPORT—1957

In previous annual reports, we have sketched the history of THE JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY from its inception in October, 1902, to be the mouthpiece of the newly reorganized Michigan State Medical Society which had become a democratic organization with representative controls, delegates representing the component county societies and a governing body, The Council. This was a new concept in medical organization, Michigan being one of the very first to accomplish this purpose and it seemed fitting that the society should have a method of communicating to its members the important and interesting facts of medical economy, policy—as well as science.

Dr. Andrew P. Biddle, first editor, working with Dr. Leartus Conner, then Chairman of The Council, succeeded in making a very impressive and successful venture. The December, 1957, number completes Volume 56 and completes 664 issues of THE JOURNAL. The original objective of THE JOURNAL has been carried out down through the years by a succession of editors, all of them making the publication strictly a medical journal, giving scientific facts and papers, new discoveries, new thought, new discussion, making an effort to bring to the readers the very latest available knowledge in the whole field of medicine and surgery. There were numerous medical journals publishing scientific

material. The Michigan State Medical Society believed during all the years—and still does—that the other interests of the profession should be brought to us in an authoritative manner. Through the years. THE JOURNAL has published in addition to scientific papers, news items, facts, actions and accomplishments of interest to our profession. It has discussed the economic stress of carrying on through reconstructive years, through the growth years and had brought to our attention, the various threats to our independence and to our individuality.

Serious problems have faced the profession through all the years. These problems have been met by the representatives, the elected spokesmen and by the membership itself in every instance. THE JOURNAL has played a large part in presenting this material to the readers. In the early days of our existence as a State Medical Society, Michigan produced giants in the science and art of medicine, men who have made their marks in history: Victor C. Vaughn, Donald MacLean, Theodore McGraw—to mention a very few, were outstanding in their accomplishment.

As the profession increased in numbers and became more adept in working together, the turn of the century seemed to be a time to consolidate some of the ambitions of our leaders. The newly re-organized society and THE JOURNAL became a force in the community and in the medical world. Throughout the years THE JOURNAL has tried to carry out these policies, ever exploring them and expanding to new functions as new policies were conceived, new antagonisms developed, new projects adopted. We have continued this editorial policy by informing our members of the expanding ambitions, the increasing socio-economic pressures, and the needs to carry into fruition the various services which have been an outgrowth, very largely, of medical thought in our state.

The last two decades have seen concerted efforts from various pressure groups to limit and control the practice of medicine. At one time during the '30's, it was legislative threats from Washington; at other times, it was the long depression years, the years when most of our patients could not pay. Michigan was most active in establishing the Blue Shield program primarily so that the low income group of people might have the needed medical service assured to them. To our modern minds, it seems unbelievable but in 1939 and 1940 when our Blue Shield was established, 85 per cent of the families of the state of Michigan were earning less than $2,500 a year. The work of creating a Blue Shield program and of preserving that program, has been one of the functions of THE JOURNAL. A uniform fee schedule for governmental agencies was another item which helped to make living fees possible. To mention other things, the society had established numerous committees which had various functions and which worked voluntarily and diligently to carry on their program.

About twelve or thirteen years ago, THE JOURNAL adopted the policy, after long consideration of the publication committee and the executive committee of The Council, of making special numbers or parts of numbers available to these specific committees or functions of the society so that this accumulated knowledge could be made public. About that time we abandoned the old formal cover of THE JOURNAL and have not used two covers alike for many years. This year, we have followed through. The January number was devoted to the problems of the heart, to our committees and the Michigan Heart Association. The cover was suggestive of the immense progress that has been made in heart surgery, and shows a heart in many of its details with the quotation "serving the physician through research." The February issue was dedicated to the Genesee County Medical Society and featured their annual cancer day, announcing the program which was to appear April 17 in Flint. The cover featured a crab. The subject matter for March was child health and pictured a very happy looking child with her dolls. April was our cancer number and it showed Esculapius with his sword and shield fighting a many-headed monster—"kill cancer quackery." May had a woodland scene, a man, a child and a dog following the pathways—"exercise—the first step toward successful aging," and was devoted to geriatrics primarily. The June number for many years has been devoted to Michigan Medical Service. The cover had our Blue Shield, quotation "operation crossroads," with roadsigns and problems, and of course featured the tremendous questions and problems the State Medical Society and Michigan Medical Service have been trying to solve. In July came the announcements for the Annual Session—"new perspectives." The cover featured a globe with a part of the American hemisphere and a satellite. Was it a preconception of the sputnik which came later? August featured the Upper Peninsula Medical Society—their meeting, their problems, ambitions and questions and efforts. The cover showed a map of the Upper Peninsula, a pine tree, the Mackinac bridge and a freighter going under it. September was devoted to traffic accidents and the cover was driving hands on an automobile wheel with the speedometer registering 55 miles—title, "Prevent traffic accidents" and in red—"Your life is in your hands." This issue also carried our directory with a map of the state with the number of members inscribed in each county totalling 6,302. Mental health was the topic for October and featured two womens' faces, one with an improved mental expression. November had been assigned to "the physician as a citizen" and it worked out just right. It carried the reports of the Market Opinion Survey which had been conducted in Michigan, had been presented to the Annual Meeting and had made such a spectacular impression upon the whole medical world. A medical man was pointing to "progress." This was the largest number THE JOURNAL has ever attempted and the most elaborate. December, for many years, has been devoted to Michigan Clinical Institute and has a chart with a health line showing "yesterdays helpless now curable."

During the year, we have published original articles with 153 authors, of whom nine appeared twice. This is a very large distribution of our authors and presents the activity of a goodly percentage of our membership in the scientific field. We have published abstracts of thirty-seven books, most of which have been presented to the reviewers or deposited in some of our libraries. We have prepared and published eighty-one editorials, a very few on scientific subjects conforming with a specific feature of that particular number of THE JOURNAL, and these by guest editorial writers. Most of our editorials have been along the socio-economic or legislative interest of the profession. We have attempted to furnish to our readers in Michigan, the very best medical research and reporting. We have published 116 "in memoriam" testimonials including those of two past presidents: J. D. Brook of Grand Rapids and R. S. Morrish of Flint. We also memorialized the founder of the printing company which has published our JOURNAL for so many years, John Robert Bruce.

The size of THE JOURNAL has been increasing. In 1953, we published 1414 pages in 1954 we published 1454 pages; in 1955 we published 1558 pages; in 1956 we published 1578 pages, and in 1957 we published 1646 pages. That does not report the whole story. In 1957, we accepted many more "tipped-in" double pages or more from the advertisers.

A survey of the last six months and what they contain follows: Under the word text, we have included all society materials, original articles, editorials, news and book reviews, tables of contents, lists of committees, everything strictly referring to the Society. Under advertising, we have included all the pages devoted to advertising. In July, we published 99 pages of text with 57 of advertising; in August, there were 99 pages of text and 51 of advertising; in September, there were 68 pages of text and 72 of advertising; in October, there were 80 pages of text and 78 of advertising; in No-

vember, there were 102 pages of text and 72 of advertising; and in December, there were 92 pages of text and 74 of advertising.

All of this adds up to 968 pages, but the numbered pages were only 842. The extra 126 pages were made up of "tipped-in" advertising and inserts in the center. We had one four-page "tipped-in" insert in the November number calling special attention to our membership of certain items and "principles of procedure." The first six months of the year were not reviewed with the same idea in mind. We wish to call special attention to the November number which we mentioned as being the largest we have ever published. That number had nine "tipped-in" inserts, the special four-page list of principles and procedure mentioned, and twenty-two pages of advertising. Every one of these "tipped-in" inserts has to be hand done and separately glued into the assembled JOURNAL before it is stapled and bound. In many of these cases, the pages had to be slit in order to allow the insertion in the proper space. This procedure delayed that particular number of THE JOURNAL for two weeks in the process of preparation.

We are happy to see the need of this special advertising. It pays extra and shows the appreciation of our advertisers for our value as an advertising medium. This necessarily adds hundreds of labor days to the publication. We have been sending our material to the printer approximately a week earlier than previously, and still we have not caught up with our date line.

The editor wishes to report that he attended the Conference of Editors and editorial personnel in Chicago in October—a two-day session—and was highly gratified at the reception. Mr. O. M. Forkert, who two years ago at the previous meeting of this group, surveyed all the state medical journals and made critical analyses of them, was very complimentary to our JOURNAL. He said that by searching diligently, he could find only one or two spots to criticize. Last year in our President's page, we had Dr. Arch Walls looking away from his text and from the reader. That has been corrected with Dr. Slagle this year. He was very much interested and spent a whole noon with the editor to learn our method of procedure. He wanted to know who prepared our editorials, being of the opinion that it was too much of a job to expect from one man and did we assign it to various members of the publication committee. The editor told him what our publication committee and our executive committee have known for fifteen years. The preliminary form for the editorials is dittoed and submitted for review, criticism and comments to the publication committee, the President, the President-Elect, Secretary, Executive Director, Chairman of the Council, Vice Chairman, and others. If writing about some particular topic, various members of the society having special knowledge are also consulted. We send out about fifteen of these copies every month. Mr. Forkert told the group of this procedure, complimenting us very highly, because it accomplishes several purposes—an invitation for suggestions, determination of clarity of expression, faithful interpretation of the society's ideals, and a checking from those with an exact knowledge which the editor might not have. It also furnishes a sharing of the responsibility of having spoken the true opinions of the society with those who are making those decisions.

One of the editors told us of an experience he had. For several years, he had consulted a particular friend in the preparation of his editorials. One month not long ago, this friend being out of town, he sent his unchecked editorials to the printer. When the friend came home and read the editorial comments, they sent a truck to the post office, gathered up the whole issue of THE JOURNAL, took it back to the printers, took the covers off, the stitching out, reprinted eight pages, rebound, restitched and remailed. That editor was very happy with the suggestion coming from Michigan and says he will never be caught again in that manner.

Most of our state medical journals do not publish many editorials but assign certain members of the editorial staff to write the editorial for designated numbers. Some invite guest editorial writers to prepare a special editorial. We were complimented from many sources on THE JOURNAL and its appearance, especially the entirely new covers at every issue with no advertising on the cover.

The editor is happy to express to his confreres of the Publication Committee, the Executive Committee and The Council as well as other advisors in the official family, for their aid and advice in the conduct of his work. It is the labor in which he is happy and for which he wishes to express his grateful satisfaction in the way his efforts have been accepted.

Respectfully submitted,
WILFRID HAUGHEY, M.D.
Editor

MSMS 1958 BUDGET ESTIMATES

GENERAL FUND

ACCOUNT TITLE	1958 Estimate
INCOME:	
5250 members @ $60.00	$315,000.00
Less: $1.50 to THE JOURNAL	7,875.00
$6.25 to Public Education	32,812.50
$3.50 to Public Service	18,375.00
$5.25 to Professional Relations	27,562.50
$10.00 to MSMS Headquarters Fund	52,500.00
$2.00 to Building Maintenance Fund	10,500.00
$3.00 to Public Education Reserve	15,750.00
Balance to General Fund @ $28.50	$149,625.00
Interest and Miscellaneous Income	7,000.00
TOTAL FUNDS AVAILABLE	$156,625.00
EXPENSES: (Administrative and General)	
Printing, Mailing and Postage	$ 12,000.00
Office Supplies	4,000.00
Insurance and Bonds	4,500.00
Auditing	750.00
Salaries: Administrative and Office (Including Legal Counsel)	32,656.00
General Counsel Expense	500.00
Equipment and Repairs	3,000.00
Telephone and Telegraph	7,000.00
Taxes (Other than property)	2,300.00
Miscellaneous Expenses and Contributions	2,000.00
Employe's Retirement Trust	10,000.00
I.B.M.	1,800.00
Total Administrative and General Expenses	$ 80,506.00
EXPENSES: (Society Activities)	
Council Expense	$ 19,000.00
AMA Delegates and Alternates	7,000.00
General Society Travel and Entertainment	7,500.00
Officers Travel	5,500.00
Secretary's Letters and Office Expense	800.00
Woman's Auxiliary	600.00
Dues Collection Expense	3,000.00
Total Society Activities	$ 43,400.00
EXPENSES: (Committees)	
Cancer Coordinating Committee	$ 1,000.00
Child Welfare Committee	300.00
National Defense Committee	400.00
Geriatrics Committee	500.00
Industrial Health	100.00
Legislative	1,200.00
Maternal Health	450.00
Mental Health	450.00
Michigan Health Council	10,000.00
Postgraduate Medical Education	3,000.00
Preventive Medicine	100.00
Permanent Conference Committee (Rehabilitation Conference $200.00)	450.00
Rural Medical Service	150.00
Scientific Radio	1,000.00
Tuberculosis Control	200.00
Venereal Disease	100.00
Beaumont Memorial Restoration	—0—
Highway Accident Committee	520.00
Miscellaneous Committees	2,400.00
Iodized Salt	500.00
Advisory Committee to Medical Assistants	300.00
Medical Economics and Ethics Courses	262.00
Big Look Committee	500.00
Uniform Fee Schedule for Government Agencies	400.00
Total Committee Expense	$ 24,282.00

TOTAL GENERAL FUND EXPENSES		$148,188.00
GAIN OR LOSS FOR THE YEAR	(G)	8,437.00
BALANCE FROM PRIOR YEARS		133,962.62
		$142,399.62
NET GAIN OR LOSS FROM ANNUAL SESSION AND THE JOURNAL	(L)	7,628.00
BALANCE TO FUTURE YEARS		$134,771.62

BUILDING MAINTENANCE FUND

INCOME:	
Allocation from membership dues	$ 10,500.00
EXPENSES:	
Maintenance: Utilities, Decorating, supplies, etc.	2,800.00
Salaries: Janitor	1,800.00
Property Taxes	1,050.00
Insurance: Fire and Liability	500.00
Depreciation	1,600.00
Furnishings	—0—
Remodeling (roof)	500.00
Parking Area	—0—
Miscellaneous	200.00
Total Building Maintenance Expenses	$ 8,450.00
GAIN OR LOSS FOR THE YEAR (G)	2,050.00
BALANCE FROM PRIOR YEARS	16,983.53
BALANCE TO FUTURE YEARS	$19,033.53

MSMS HEADQUARTERS FUND

INCOME:	
Allocation from membership dues	$ 52,500.00
Balance from prior years	28,135.00
Total MSMS Headquarters Fund	$ 80,635.00

CONTINGENT FUND

INCOME:	
Allocation from membership dues	—0—
Balance from prior years	53,614.34
Total Contingent Fund	$ 53,614.34

ANNUAL SESSION

ACCOUNT

INCOME:	
Booth Sales: 102 spaces	$ 23,500.00
EXPENSE:	
Scientific Meeting	$ 3,500.00
Exhibit	4,000.00
Registration and Hotel	900.00
State Society and Officers Night	3,500.00
Promotion: Printing, Mailing, Postage and Scientific Work Committee	2,000.00
Press Expense	2,000.00
Salaries	5,500.00
House of Delegates Expense	2,000.00
Miscellaneous Expenses	500.00
Total Annual Session Expense:	$ 23,900.00
GAIN OR LOSS ON ANNUAL SESSION (L)	$400.00

MICHIGAN CLINICAL INSTITUTE

INCOME:	
Booth Sales: 73 spaces	$ 13,080.00
EXPENSES:	
Scientific Meeting	$ 2,000.00
Exhibit	4,000.00
Registration and Hotel	700.00
Promotion: Printing, Mailing and Postage	2,000.00
Press	1,700.00
Salaries	1,500.00
Residents and Interns Conference	150.00
Miscellaneous Expense	500.00
Total MCI Expense	$ 12,550.00
GAIN OR LOSS ON MCI (G)	$ 530.00

THE JOURNAL

ACCOUNT

INCOME:	
Allocation from membership dues	$ 7,875.00
Subscriptions—non-members	750.00
Advertising sales	97,987.00
Reprint and Cut Sales	4,000.00
Miscellaneous Income	—0—
Total Income	$110,612.00
EXPENSES:	
Editor's Secretary	$ 1,800.00
Editor's Expense	3,000.00
Printing, Mailing and Postage	63,000.00
Reprint and Cut Expense	4,000.00
Salaries	21,070.00
Discounts and Commissions	25,000.00
Miscellaneous Expenses	500.00
Total Expenses	$118,370.00
GAIN OR LOSS ON THE JOURNAL (L)	$ 7,758.00

PUBLIC EDUCATION RESERVE

ACCOUNT

INCOME:	
Allocation from membership dues	$15,750.00
Balance from prior years	74,084.00
Total Public Education Reserve	$ 89,834.00

PUBLIC EDUCATION ACCOUNT

INCOME:	
Allocation from membership dues	$ 32,812.50
Other income	100.00
Total Income	$ 32,912.50
EXPENSES:	
Committee Meetings	$ 500.00
Equipment and Repairs	1,500.00
Printing, Mailing and Postage	1,500.00
Office Supplies	2,000.00
Salaries	20,700.00
Telephone and Telegraph	1,000.00
Travel and Entertainment	6,000.00
Exhibit Expenses	2,000.00
Publications, Pamphlets, Clippings	1,500.00
Radio, TV and Cinema	6,000.00
Miscellaneous Expense	800.00
Library	3,000.00
Survey	—0—
Total Expense	$ 46,500.00
GAIN OR LOSS FOR THE YEAR (L)	13,587.50
BALANCE FROM PRIOR YEARS	40,765.04
BALANCE TO FUTURE YEARS	$ 27,177.54

PUBLIC SERVICE ACCOUNT

TITLE

INCOME:	
Allocation from membership dues	$ 18,375.00
EXPENSES:	
Salaries	$ 20,700.00
Telephone and Telegraph	600.00
Travel and Entertainment	6,000.00
Rural Health Conference	131.14
Miscellaneous Expenses	—0—
Committee Meetings	100.00
Total Expenses	$ 27,531.14
GAIN OR LOSS FOR THE YEAR (L)	9,156.14
BALANCE FROM PRIOR YEARS	2,761.86
BALANCE TO FUTURE YEARS (L)	$ 6,394.28

PROFESSIONAL RELATIONS

INCOME:	
Allocation from membership dues	$ 27,562.50
EXPENSES:	
Rent to Wayne County Medical Society	$ 720.00
Salaries	20,700.00
Telephone and Telegraph	1,000.00
Travel and Entertainment	6,000.00
National Meeting Expense	2,000.00
County Secretary's—P.R. Conference	6,135.92
County Society & Field Secretary Meetings	500.00
Woman's Auxiliary	1,000.00
Miscellaneous Expense	100.00
Committee Meetings	—0—
Printing, Mailing and Postage	1,000.00
Total Expenses	$ 39,155.92
GAIN OR LOSS FOR THE YEAR (L)	11,593.42
BALANCE FROM PRIOR YEARS	4,423.70
BALANCE TO FUTURE YEARS (L)	$ 7,169.72

RHEUMATIC FEVER CONTROL PROGRAM

TITLE

INCOME:	
From Michigan Heart Association	$ 15,000.00
EXPENSES: (Central Office)	
Committee Meetings	600.00
Equipment and Repairs	200.00
Payroll Taxes	350.00
Printing, Mailing and Postage	1,750.00
Office Supplies	100.00
Publications and Pamphlets	—0—
Salaries: Administrative and Office	15,000.00
Travel	1,000.00
Fellowships	3,000.00
Telephone and Telegraph	—0—
Laboratory Aid Plan	—0—
Travel Fellowships	—0—
Annual Rheumatic Fever Day	—0—
Circulating Exhibits	—0—
Total Central Office Expense	$ 22,000.00

EXPENSES: (Control Centers)		
Alpena		500.00
Ann Arbor		800.00
Bay City		200.00
Benton Harbor		—0—
Detroit		500.00
Grand Rapids		1,500.00
Jackson		—0—
Kalamazoo		1,200.00
Lansing		—0—
Muskegon		200.00
Petoskey		100.00
Pontiac and Royal Oak		100.00
Saginaw		100.00
Sault Ste. Marie		—0—
Traverse City		1,000.00
Total Control Center Expenses		$6,200.00
Total Rheumatic Fever Expenses		28,200.00
GAIN OR LOSS FOR THE YEAR	(L)	13,200.00
BALANCE FROM PRIOR YEARS		12,679.95
BALANCE TO FUTURE YEARS	(L)$	520.05

REPORT OF KNOSTMAN & SMITH, CPA—1957

Executive Committee of the Council
Michigan State Medical Society

We have examined the Statement of Financial Condition of the MICHIGAN STATE MEDICAL SOCIETY, Lansing, Michigan, as at November 30, 1957, and the related statements of income and expense and fund transactions for the eleven-month period then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying Statement of Financial Condition and related statements of income and expense and fund transactions, presents fairly the position of the MICHIGAN STATE MEDICAL SOCIETY as at November 30, 1957, and the results of its operations for the eleven-month period then ended, in conformity with generally accepted accounting principles applied on a consistent basis.

KNOSTMAN & SMITH
Certified Public Accountants

Lansing, Michigan
December 27, 1957

We submit the following comments relative to our examination of the MICHIGAN STATE MEDICAL SOCIETY, Lansing, Michigan, for the eleven-month period ended November 30, 1957.

HISTORY

The MICHIGAN STATE MEDICAL SOCIETY was organized on September 17, 1910, under the laws of the State of Michigan, as a non-profit corporation. The charter has been extended for a period of thirty years from September 17, 1940. The Society is affiliated with the American Medical Association, and it charters county medical societies within the State of Michigan. The purposes of the Society are the promotion of the science and art of medicine, the protection of the public health, and the betterment of the medical profession. In the furtherance of these purposes, the Society publishes "The Journal of the Michigan State Medical Society."

COMMENTS

The commercial bank account maintained at the Michigan National Bank, Lansing, Michigan, was reconciled to your books of account, and further confirmed by direct correspondence with the bank as at November 30, 1957.

Confirmation of the treasurer's account as at November 30, 1957, was received from the Michigan National Bank, Grand Rapids, Michigan. The savings account in an amount of $10,000.00 plus $150.56 interest as at November 30, 1957, was confirmed by direct correspondence with the Michigan National Bank, Lansing, Michigan.

Petty cash in the Lansing office, in an amount of $36.61, was counted by our representative. Cash of $50.00 in the Detroit office was not verified.

Direct confirmations of Accounts Receivable have been mailed. A small percentage of replies have been received by our office. Your office will be notified in the event of negative replies. An aging analysis of the accounts by the month of charge is as follows:

September, October, November	$17,243.80
June, July, August	114.98
Over six months	2,018.39
TOTAL	$19,377.17

The employes portion of insurance premiums applicable to the Society retirement plan ($1,553.07 at November 30, 1957) are to be reimbursed to the Society via a payroll checkoff.

A summary of the 1957 premium costs is as follows:

	Total	*Society Share*	*Employee Share*
Premium—1 year	$19,699.72	$10,680.47	$9,019.25
Adjustments	860.65	483.05	377.60
NET	$18,839.07	$10,197.42	$8,641.65
Collections from Employees	7,088.58		7,088.58
	$11,750.49		$1,553.07
Due from Employees in November 1957 and January, 1958	1,553.07		1,553.07
NET SOCIETY COST	$10,197.42	$10,197.42	$ —0—

Schedule No. 10 sets forth in detail the changes in your investments during the period, together with an analysis of interest received and amortization taken. Securities were confirmed by the Michigan National Bank, Grand Rapids, Michigan, in a letter to our office. The letter was dated December 18, 1957.

Real estate owned and applicable depreciation allowances are set forth in Schedule No. 11.

The cost of equipment for a library was charged to expense of the Public Education Program.

Office equipment purchased during the period under review was charged to expense in acordance with the Society policy of not reflecting equipment as an asset.

Membership dues for the period were reconciled to the 5,694 membership cards issued to paying members.

Confirmations were mailed to county Societies reporting dues of $10,000.00 or more for the eleven month period ended November 30, 1957. Your office will be notified of any negative confirmations.

Both space income for the Annual Session and the Michigan Clinical Institute was verified by our representative, and a test check of JOURNAL Advertising was traced through your books of account.

Net gain for all society functions for the eleven-month period ended November 30, 1957 was $62,415.11, the detail of which is shown in Exhibit C.

Respectfully submitted,
KNOSTMAN & SMITH
Certified Public Accountants

NOTE: The 1957 actual expenses were for an eleven-month period, as the books were closed and audit made as of November 30, 1957 for this one year only in order to change the accounting period to December 1-November 30.

STATEMENT OF INCOME AND EXPENSES
December 24, 1956, to November 30, 1957

INCOME		
Membership dues	$160,043.96	
Miscellaneous	172.27	
Interest income (Schedule 10)	6,544.05	
Amortization (Schedule 10)	660.03	$167,420.31
OTHER INCOME		
Annual Session (Schedule 2)	426.54	
Michigan Clinical Institute (Schedule 3)	(168.34)	
THE JOURNAL (Schedule 4)	12,411.81	12,670.01
TOTAL INCOME		$180,090.32
EXPENSES		
Administrative and general (Schedule 1)	75,637.03	
Society activity (Schedule 1)	39,042.99	
Committee expenses (Schedule 1)	21,318.24	135,998.26
NET GAIN		$ 44,092.06

EXPENSES
December 24, 1956, to November 30, 1957

ADMINISTRATIVE AND GENERAL	
Printing, mailing and postage	$ 8,470.42
Office supplies	4,781.46
Insurance and fidelity bonds	1,749.79
Auditing	750.00
Salaries—Administrative and office	32,954.79
General counsel retainer and expense	484.35
Equipment and repairs	4,304.46
Telephone and telegraph	6,018.21
Payroll taxes	2,687.07
Miscellaneous expense	1,484.53
Employee's retirement trust	10,197.42
International Business Machines	1,754.53
TOTAL ADMINISTRATIVE AND GENERAL EXPENSES	$75,637.03
SOCIETY ACTIVITIES	
Council expense	$18,605.60
Delegates and Alternates to AMA	5,657.99
General Society travel and entertainment	6,117.85
Officers' travel	4,239.12
Secretaries' letters	789.17
Woman's Auxiliary	600.00
Dues collection expense	3,033.26
TOTAL SOCIETY ACTIVITIES EXPENSES	$39,042.99
COMMITTEE EXPENSES	
Legislative	$ 1,437.10
Postgraduate medical education	3,043.09
Preventive medicine	84.99
Cancer Coordinating Committee	1,000.00
Child Welfare	211.68
Geriatrics	794.73
Industrial health	-0-
Maternal health	440.43
National Defense	512.22
Mental health	466.91
Scientific radio	1,196.97
Venereal disease	55.74
Tuberculosis Control	193.08
Michigan Health Council	10,000.00
Rural Medical Service	32.00
Highway Accident Committee	145.74
Beaumont Memorial Restoration	(1,198.58)
Permanent Conference Committee	266.74
Sundry committee expense	2,635.40
TOTAL COMMITTEE EXPENSES	$21,318.24
TOTAL EXPENSES (EXHIBIT B)	$135,998.26

INCOME AND EXPENSE OF THE ANNUAL SESSION
December 24, 1956, to November 30, 1957

INCOME	
Booth sales (132 spaces)	$30,977.50
TOTAL INCOME	$30,977.50
EXPENSES	
Scientific meeting	$ 3,084.47
Registration and hotel expense	836.37
Exhibit expense	5,480.98
State Society and Officers night	5,138.12
Promotion—printing, mailing, postage and Scientific Work Committee	1,469.07
Press expense	1,763.21
Salaries	7,456.99
House of Delegates	4,304.39
Miscellaneous expense	1,017.36
TOTAL EXPENSES	$30,550.96
GAIN OR (LOSS) ON ANNUAL SESSION	$ 426.54

INCOME AND EXPENSE OF THE MICHIGAN CLINICAL INSTITUTE
December 24, 1956, to November 30, 1957

INCOME	
Booth sales (75 spaces)	$13,650.00
TOTAL INCOME	$13,650.00
EXPENSES	
Scientific meeting	$ 1,840.82
Registration and hotel	655.51
Exhibit expense	4,087.50
Promotion—printing, postage, mailing and Committee Meetings	2,325.09
Press expense	1,845.92
Salaries	1,704.47
Residents and interns conference	81.63
Miscellaneous	1,277.40
TOTAL EXPENSES	$13,818.34
GAIN OR (LOSS) ON M. C. I.	$ (168.34)

INCOME AND EXPENSE OF "THE JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY"
December 24, 1956, to November 30, 1957

INCOME	
Allocation from dues	$ 8,419.50
Subscriptions of others	712.11
Advertising sales	99,805.72
Reprint and cut sales	4,178.73
Miscellaneous (cash discounts)	-0-
TOTAL INCOME	$113,116.06
EXPENSES	
Editors expense	$ 2,750.00
Printing, mailing and postage	58,750.59
Reprint and cut	3,827.97
Salaries	13,102.98
Discounts and commissions	22,272.71
Miscellaneous	-0-
TOTAL EXPENSES	$100,704.25
GAIN ON THE JOURNAL	$ 12,411.81

INCOME AND EXPENSE OF THE BUILDING MAINTENANCE FUND
December 24, 1956, to November 30, 1957

INCOME	
Allocation from 1957 dues	$11,226.00
TOTAL INCOME	$11,226.00
EXPENSES	
Maintenance—utilities, decorating, supplies, yard work, etc.	2,888.70
Janitor—salary	1,654.47
Taxes—property	1,021.74
Insurance	474.65
Depreciation	1,636.92
Reception room furnishings	—0—
Remodeling	531.03
Miscellaneous	159.90
TOTAL EXPENSES	$ 8,367.41
GAIN ON BUILDING MAINTENANCE FUND	$ 2,858.59

INCOME AND EXPENSE OF THE PUBLIC EDUCATION PROGRAM
December 24, 1956, to November 30, 1957

INCOME	
Allocation from dues	$ 35,081.25
Miscellaneous (commissions)	137.95
TOTAL INCOME (Note 1)	$ 35,219.20
EXPENSES	
Committee meetings	422.30
Equipment and repairs	1,017.46
Printing, mailing and postage	1,494.83
Office supplies	1,000.50
Salaries	16,405.63
Telephone and telegraph	584.34
Travel and entertainment	12,023.81
Publications, pamphlets and clippings	1,081.40
Radio, television and cinema	2,909.68
Exhibit expense	1,101.34
Miscellaneous	620.79
Library	4,670.93
Survey	25,013.02
TOTAL EXPENSES	$ 68,346.03
GAIN OR (LOSS) DURING PERIOD	$(33,126.83)

Note 1
This does not include $16,839.00 allocation of dues specifically set aside for the Public Education Reserve per Exhibit C.

INCOME AND EXPENSE OF THE PUBLIC SERVICE ACCOUNT

December 24, 1956, to November 30, 1957

INCOME	
Allocation from dues	$19,645.50
TOTAL INCOME	$19,645.50
EXPENSES	
Committee meetings	—0—
Salaries	$16,405.63
Telephone and telegraph	293.06
Rural health conference	131.14
Travel and entertainment	3,728.97
TOTAL EXPENSES	$20,558.80
GAIN OR (LOSS) DURING PERIOD	$ (913.30)

INCOME AND EXPENSE OF THE PROFESSIONAL RELATIONS ACCOUNT

December 24, 1956, to November 30, 1957

INCOME	
Allocation from dues	$29,468.24
TOTAL INCOME	29,468.24
EXPENSES	
Postage, mailing and printing	$ 675.89
Rent to Wayne County Medical Society	480.00
Salaries	16,405.63
Telephone and telegraph	439.59
Travel and entertainment	3,519.64
National meeting expense	1,484.08
Public relations—County Secretarys' Conference	6,194.63
County Society and Field Secretarys' meetings	—0—
Womans' Auxiliary	742.58
Miscellaneous	—0—
TOTAL EXPENSES	$29,942.04
GAIN OR (LOSS) DURING PERIOD	$ (473.80)

INCOME AND EXPENSE OF THE RHEUMATIC FEVER CONTROL PROGRAM

December 24, 1956, to November 30, 1957

INCOME	
Grant from Michigan Heart Association	$15,294.75
TOTAL INCOME	$15,294.75
EXPENSES (Central office)	
Committee meetings	$ 704.52
Equipment and repairs	—0—
Payroll taxes	147.45
Printing, mailing and postage	151.95
Office supplies	—0—
Publications and pamphlets (purchased)	—0—
Salaries—administrative and office	916.66
Travel	—0—
Fellowships	2,272.78
Laboratory Aid Plan	—0—
Telephone and telegraph	—0—
Travel Fellowships	—0—
Annual Rheumatic Fever Day	—0—
Circulating Exhibits	—0—
TOTAL CENTRAL OFFICE EXPENSES	$ 4,193.36
CONTROL CENTERS	
Alpena	$ 200.00
Ann Arbor	1,317.50
Bay City	715.00
Benton Harbor	75.00
Detroit	—0—
Grand Rapids and Muskegon	1,675.00
Jackson	—0—
Kalamazoo	1,127.50
Lansing	—0—
Petoskey	—0—
Pontiac and Royal Oak	—0—
Saginaw	—0—
Sault Ste. Marie	—0—
Traverse City	987.00
TOTAL CONTROL CENTERS	$ 6,097.00
TOTAL EXPENSES	$10,290.36
GAIN OR (LOSS) DURING PERIOD	$ 5,004.39

STATEMENT OF FINANCIAL CONDITION

November 30, 1957

ASSETS

CASH ON HAND AND IN BANKS			
Michigan National Bank			
Lansing, Michigan		$ 15,138.21	
Grand Rapids, Michigan			
(Treasurer's account)		15,122.70	
Savings account		10,150.56	
Office cash (Lansing and			
Detroit, Michigan)		86.61	$ 40,498.08
ACCOUNTS RECEIVABLE			
Advertising, allowances and other items		$ 19,367.54	
Collection expense		9.63	
Due from employees-Insurance premiums		1,553.07	
Employee advances		376.98	
		$ 21,307.22	
LESS Allowance for doubtful accounts		126.30	$ 21,180.92
INVESTMENTS (Schedule 10)			
Held for Public Education		58,000.00	
Held for General Fund		212,455.28	$270,455.28
(Market or Redemption Value $265,509.43)			
PROPERTY AND EQUIPMENT			
(Schedule 11)			
Land		$ 10,000.00	
Office building	$ 34,500.00		
Lot adjoining office building	6,000.00		
Building improvements	5,664.06		
Building equipment	3,836.09		
Parking lot	1,913.60	$ 51,913.75	
		$ 61,913.75	
LESS Depreciation allowance		10,271.47	$ 51,642.28
OTHER ASSETS			
Prepaid expenses		521.77	
Deposit on purchase of land		5,000.00	$ 5,521.77
TOTAL ASSETS			$389,298.33

LIABILITIES

ACCOUNTS PAYABLE			
Federal Unemployment Tax			$ 211.17
Michigan Unemployment Tax			167.22
Unpaid invoices			16,802.07
Payroll taxes—payable			4,707.83
TOTAL ACCOUNTS PAYABLE			$ 21,888.29
SOCIETY EQUITIES			
RESERVED FOR SPECIAL PURPOSES			
Public Education Reserve	$ 74,084.00		
Public Education Program	40,765.04	$114,849.04	
Public Service Account		2,761.86	
Professional Relations Account		4,423.70	
Rheumatic Fever Control Program		12,679.95	
Contingent Fund		53,614.34	
Building Fund		16,983.53	
Headquarters Fund		28,135.00	
TOTAL RESERVED		$233,447.42	
General Society Equity			
12-24-56	89,870.56		
Net gain for period			
(Exhibit B)	44,092.06	$133,962.62	
TOTAL EQUITIES (Exhibit C)			$367,410.04
TOTAL LIABILITIES AND EQUITIES			$389,298.33

INCOME AND EXPENSE SUMMARY
December 24, 1956, to November 30, 1957

	Balance 12-24-56	*Income For The Period*	*Expenses For The Period*	*Net Gain or (Loss)*	*Balance 11-30-57*
Equity—General Fund		$167,420.31	$135,998.26	$ 31,422.05	
Annual Session		30,977.50	30,550.96	426.54	
Michigan Clinical Institute	$ 89,870.56	13,650.00	13,818.34	(168.34)	$133,962.62
THE JOURNAL		113,116.06	100,704.25	12,411.81	
Contingent Fund	53,614.34	-0-	-0-	-0-	53,614.34
Building Fund	14,124.94	11,226.00	8,367.41	2,858.59	16,983.53
Public Education Reserve	57,245.00	16,839.00	-0-	16,839.00	74,084.00
Public Education Program	73,891.87	35,219.20	68,346.03	(33,126.83)	40,765.04
Public Service	3,675.16	19,645.50	20,558.80	(913.30)	2,761.86
Professional Relations	4,897.50	29,468.24	29,942.04	(473.80)	4,423.70
Rheumatic Fever Control Program	7,675.56	15,294.75	10,290.36	5,004.39	12,679.95
Headquarters Fund	—0—	28,135.00	-0-	28,135.00	28,135.00
TOTAL	$304,994.93	$480,991.56	$418,576.45	$62,415.11	$367,410.04

PROPERTY AND DEPRECIATION ALLOWANCES—November 30, 1957

	Date Acquired	Cost	Depreciation Allowance Prior Years	Remaining Cost Beginning Of Period	Estimated Life	Depreciation Expense 1957	Depreciation Allowance 11-30-57
Land	1951	$10,000.00	$	$10,000.00		$	$
Building	1951	34,500.00	6,200.00	28,300.00	30 (11 months)	1,054.00	7,254.00
		44,500.00	6,200.00	38,300.00		1,054.00	7,254.00
BUILDING IMPROVEMENTS							
New building entrance	1953	3,917.85	457.10	3,460.75	30 (11 months)	119.70	576.80
Remodel basement and storeroom	1956	1,746.21	29.10	1,717.11	30 (11 months)	53.35	82.45
		5,664.06	486.20	5,177.86		173.05	659.25
BUILDING EQUIPMENT							
Lighting	1952	2,121.50	707.15	1,414.35	15 (11 months)	129.70	836.85
Boiler	1952	1,714.59	571.44	1,143.15	15 (11 months)	104.72	676.16
		3,836.09	1,278.59	2,557.50		234.42	1,513.01
PARKING LOT	1953	1,913.60	669.76	1,243.84	10 (11 months)	175.45	845.21
LOT ADJOINING OFFICE BUILDING	1952	6,000.00		6,000.00			
		$61,913.75	$8,634.55	$53,279.20		$1,636.92	$10,271.47

SECURITIES OWNED—November 30, 1957

	Maturity Date	Face Value	Cost 12-24-56 (Book Value)	Redemption Value 11-30-57	Purchases During Period	Sales or Redemptions During Period	Amortization Debit Or (Credit)	Cost 11-30-57 (Book Value)	Interest Received To Last Interest Date
UNITED STATES GOVERNMENT SECURITIES									
Savings Bonds—series "G"	5-1-58	$ 5,000.00	$ 5,000.00	$ 4,960.00	$	$	$	$ 5,000.00	$ 125.00
Savings Bonds—series "G"	3-1-60	5,000.00	5,000.00	4,880.00				5,000.00	125.00
Savings Bonds—series "G"	8-1-58	30,000.00	30,000.00	29,580.00				30,000.00	750.00
Treasury Bond—series "B" 2¼%	4-1-80/75	8,000.00	8,160.66	7,385.00			(8.93)	8,151.73	220.00
Savings Bonds—series "K" 2.76%	6-1-66	45,000.00	45,000.00	43,605.00				45,000.00	621.00
Savings Bonds—series "K" 2.76%	7-1-66	4,000.00	4,000.00	3,876.00				4,000.00	110.40
Treasury Bond—2½%	6-15.62/59	25,000.00	24,583.33	23,773.43			208.34	24,791.67	281.25
Treasury Bond—2½%	3-15-70/65	10,000.00	9,787.50	9,250.00			26.56	9,814.06	250.00
Treasury Bond—2½%	11-15-61	25,000.00	24,331.25	24,250.00			167.19	24,498.44	312.50*
Treasury Bond—2½%	11-15-61	35,000.00	33,932.51	33,950.00			266.87	34,199.38	875.00
Time Certificate—Michigan National Bank, 2½%, Dated 3-16-55 (Renewed)	Six months notice subject to renewal		25,000.00			25,000.00			1,657.29
Time Certificate—Michigan National Bank, 3%, Dated 10-7-57	30 days notice	25,000.00		25,000.00	25,000.00			25,000.00	
Time Certificate—Michigan National Bank, 2½%, Dated 3/18/55	30 days notice		15,000.00			15,000.00			466.05
Savings Deposit Receipt 10-24-57	Demand	15,000.00		15,000.00	15,000.00			15,000.00	
Time Certificate—Michigan National Bank, 3%	30 days notice	40,000.00		40,000.00	40,000.00			40,000.00	600.00
TOTAL SECURITIES		$272,000.00	$229,795.25	$265,509.43	$80,000.00	$40,000.00	$660.03	$270,455.28	$6,393.49
Interest on Savings Account									150.56
INTEREST INCOME									$6,544.05

*Interest of $312.50 due on Nov. 15, 1957, was deposited Dec. 11, 1957.

Note 1: $58,000.00 of securities are held for the Public Education Reserve.

MSMS RHEUMATIC FEVER CONTROL COMMITTEE

Statistical Report from January 1, 1957, to December 31, 1957

	*Total No. Adm.	Register Rh. F.	Jan. 1, 1957 Reex.	Total	Jan. 1, 1957, to Dec. 31, 1957 No. Adm.	Rh. F.	Reex.	Total	*Total No. Adm.	Register Rh. F.	Dec. 31, 1957 Reex.	Total
Alpena (19)	139	64	30	169	15	9	5	20	154	73	35	189
Ann Arbor (6)	243	231	327	570	25	13	50	75	268	244	377	645
Bay City (9)	229	85	92	321	7	3	1	8	236	88	93	329
Benton Harbor (14)	25	8	4	29	9	1	1	10	34	9	5	39
Detroit-Wayne (1)	312	54	8	320	18	5	4	22	330	59	12	342
Grand Rapids (3)	722	275	529	1251	14	5	16	30	736	280	545	1281
Jackson (15)	139	48	28	167	2	1	0	2	141	49	28	169
Kalamazoo (10)	588	183	634	1222	56	10	49	105	644	193	683	1327
Lansing (5)	115	13	20	135	1	0	0	1	116	13	20	136
Muskegon (11)	251	83	205	456	2	1	3	5	253	84	208	461
Petoskey (18)	23	21	16	39	INACTIVE				23	21	16	39
Pontiac-Royal Oak (2)	255	60	94	349	20	1	5	25	275	61	99	374
Saginaw (7)	91	27	8	99	25	3	0	25	116	30	8	124
Traverse City (13)	693	242	607	1300	50	46	80	130	743	288	687	1430
TOTALS:	3825	1394	2602	6427	244	98	214	458	4069	1492	2816	6885

*Cases and examinations on record from the beginning of the Center's activities.
**Number indicates rank of importance according to population.

UNORGANIZED CENTERS:
Battle Creek (12)
Flint (4)
Port Huron (16)

Inactive:
Benton Harbor (14)
Lansing (5)
Marquette (8)
Petoskey (18)
Sault Ste. Marie (17)

NOTE: Detroit Reported for 6 Months
Muskegon Reported for 6 Months
Lansing Reported for 2 Months

THE BOLD NEW LOOK

(Continued from Page 411)

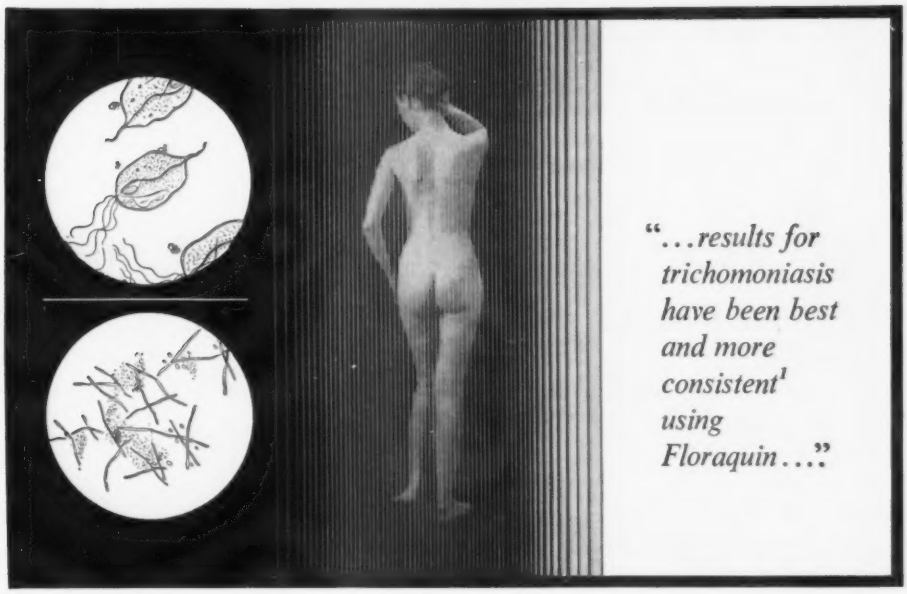
remained through the years. Beginning in his local (Kent) county medical society, Hyland was tapped for committee work and subsequently reached the presidency of the group. His activities naturally attracted the attention of the MSMS and he began committee work, was a member of the House of Delegates and of The Council of MSMS and became its president in 1946. Following his term of office, he was elected Treasurer and continues in that post today.

On the national level, his influence also has been felt. For years, as head of the Michigan delegation to the American Medical Association, Doctor Hyland has been a driving force in improving the public relations and the practice of medicine, always tempering his enthusiasm for a project to meet the climate of the times; result: his batting average has remained high.

Believing in medical traditions, Doctor Hyland assiduously avoids the harsh glare of publicity. He much prefers the soft glow of personal satisfaction from a job well done.

If there really are only two kinds of organizations, the quick and the dead, Doctor Hyland intends that the American Medical Association remain in the first category, and thanks to his successful captaincy of the team, it looks like it will.

EFFECTIVE, DEPENDABLE THERAPY FOR VAGINITIS



Floraquin® eliminates trichomonal and mycotic infection; restores normal vaginal acidity

Leukorrhea is by far the most frequent symptom of vaginitis; trichomonads and monilia are the most common causes. Many authors have reported[2] trichomonal protozoa in the vagina of 25 per cent of obstetric and gynecologic patients. Increased use of broad spectrum antibiotics has resulted in a sharp rise in the incidence of monilial infections.

Floraquin effectively eradicates both trichomonal and monilial vaginal infections through the action of its Diodoquin® content. Floraquin also furnishes boric acid and sugar to restore the normal vaginal acidity which inhibits pathogens and favors the growth of protective Döderlein bacilli.

Pitt[1] recommends vaginal insufflation of Floraquin powder daily for three to five days, followed by acid douches and the daily insertion of Floraquin vaginal tablets throughout one or two menstrual cycles. G. D. Searle & Co., Chicago 80, Illinois. Research in the Service of Medicine.

---

1. Pitt, M. B.: Leukorrhea. Causes and Management, J. M. A. Alabama 25:182 (Feb.) 1956.
2. Parker, R. T.; Jones, C. P., and Thomas, W. L.: Pruritus Vulvae, North Carolina M. J. 16:570 (Dec.) 1955.

SEARLE

MICHIGAN MOTHERS

will appreciate

Economical Medication

with

MARION'S "BETTER ASSIMILATED CALCIUM"*

and Natural Trace Minerals from OYSTER SHELL

In Four Combinations with Vitamins and Iron

- No Leg Cramps
  - More Ionized Blood Calcium
    - Fewer Secondary Anemia Problems
  - Better Tolerated Iron Therapy
- Economical Medication

Individualize Your Patient!

OS-CAL

Oyster Shell Calcium
Natural Trace Minerals
Vitamin D
DOSAGE: 1 tab. t.i.d.

OS-VIM

Oyster Shell Calcium
B-Complex
Vitamins A-D-C-E
Natural Trace Minerals
Ferrous Sulfate
DOSAGE: 1 tab. t.i.d.

OS-*feo*-CAL

Therapeutic Iron
Oyster Shell Calcium
Vitamin D
Natural Trace Minerals
DOSAGE: 1 tab. t.i.d.

OS-*feo*-VIM

Therapeutic Iron
Oyster Shell Calcium
Vitamins A-D-C-B6 and K
Natural Trace Minerals
DOSAGE: 1 tab. daily.

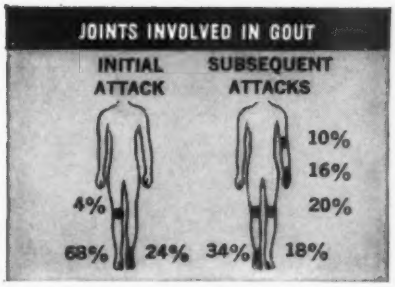
note low dosages!

MARION

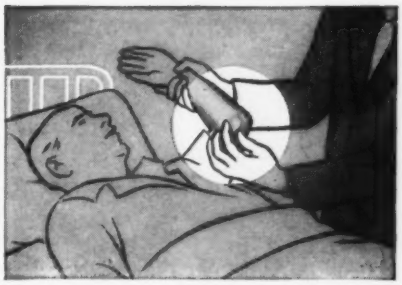
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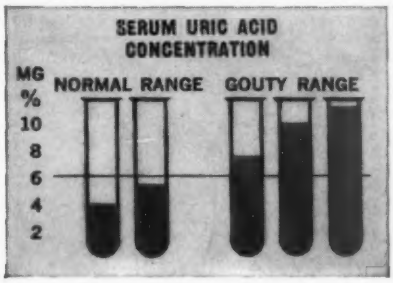
*HARDY, J. A.: *Obstet. & Gynec.* (Nov., 1956)



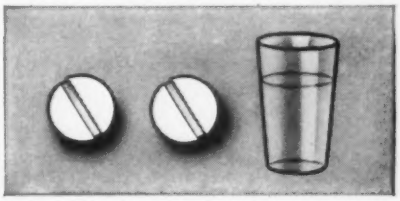
1. Recurrent joint pain followed by long periods of complete remission. *(Percentages refer to incidence.)*



2. Enlargement of bursae such as in this case involving the olecranon bursa.



3. Elevated serum uric acid levels.



4. Colchicine test: full dose (0.5 mg.) every 1 to 2 hours until pain is relieved or nausea, vomiting or diarrhea occur. The test requires usually 8 to 16 doses. Pain relief is highly indicative of gout.

FROM THESE FINDINGS...SUSPECT GOUT:

℞ BENEMID®

PROBENECID

A SPECIFIC FOR GOUT

Once findings point to gout, long-term management can be started with BENEMID. This effective uricosuric agent has these unique benefits:

- Urinary excretion of uric acid is approximately doubled.
- Serum uric acid levels are reduced.
- Uric acid deposits (tophi) in tissues are mobilized.
- Formation of new tophi can often be prevented.
- Fewer attacks and severity is reduced.

RECOMMENDED DOSAGE: 0.25 Gm. (½ tablet) twice daily for one week followed by 1 Gm. (2 tablets) daily in divided doses.

BENEMID is a trade-mark of Merck & Co., Inc.

MERCK SHARP & DOHME
DIVISION OF MERCK & CO., Inc., PHILADELPHIA 1, PA.

for "This Wormy World"



Pleasant tasting

'ANTEPAR'® brand

PIPERAZINE

SYRUP · TABLETS · WAFERS

Eliminate **PINWORMS IN ONE WEEK**
ROUNDWORMS IN ONE OR TWO DAYS

PALATABLE · DEPENDABLE · ECONOMICAL

'ANTEPAR' SYRUP – Piperazine Citrate, 100 mg. per cc.
'ANTEPAR' TABLETS – Piperazine Citrate, 250 or 500 mg., scored
NEW **'ANTEPAR' WAFERS** – Piperazine Phosphate, 500 mg.

Literature available on request

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N. Y.



If
Monilial overgrowth
is a factor

Achrostatin* V

TETRACYCLINE (PHOSPHATE-BUFFERED) AND NYSTATIN

Combines ACHROMYCIN V with NYSTATIN

SUPPLIED:

CAPSULES contain 250 mg. tetracycline HCl equivalent (phosphate-buffered) and 250,000 units Nystatin. ORAL SUSPENSION (cherry-mint flavored) Each 5 cc. teaspoonful contains 125 mg. tetracycline HCl equivalent (phosphate-buffered) and 125,000 units Nystatin.

DOSAGE:

Basic oral dosage (6-7 mg. per lb. body weight per day) in the average adult is 4 capsules or 8 tsp. of ACHROSTATIN V per day, equivalent to 1 Gm. of ACHROMYCIN V.

ACHROSTATIN V combines ACHROMYCIN† V ... the new rapid-acting oral form of ACHROMYCIN† Tetracycline... noted for its outstanding effectiveness against more than 50 different infections ... and NYSTATIN ... the antifungal specific. ACHROSTATIN V provides particularly effective therapy for those patients prone to monilial overgrowth during a protracted course of antibiotic treatment.

LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, N. Y.
*Trademark †Reg. U. S. Pat. Off.

Lederle

Michigan's Department of Health

Albert E. Heustis, M.D., Commissioner

COMPLETION OF LOWER SECTION OF BIRTH CERTIFICATE

Among some physicians there is apparently a misunderstanding regarding the use and completion of birth certificate forms. Attention is called to the following:

1. An entry must be made for each item on the birth certificate including the section "For Medical and Health Use Only."

2. In accordance with the act regulating the treating of the eyes of newborn infants, silver nitrate, 1.0 per cent solution in individual containers, is the prophylactic required to be used in each child's eyes immediately (within one hour) after birth unless the hospital staff has requested and received written permission from the State Health Commissioner for research in the use of a prophylactic other than silver nitrate. If such written permission has been given, Item 23 on the Birth Certificate should be checked "no" and the medication used indicated.

3. Items 24a, 24b and 24c on the birth certificate refer to the blood sample taken at the time of the first prenatal visit to the physician in compliance with the Prenatal Blood Test Law which states, "Every physician attending a pregnant woman in the State of

(Continued on Page 438)

MARGIN RESERVED FOR BINDING
TYPE OR PRINT (EXCEPT SIGNATURES) IN BLACK INK—THIS IS A PERMANENT RECORD
N. B.—In case of more than one child at birth, a SEPARATE RETURN must be made for each and the number of each in order of birth stated.

CERTIFICATE OF LIVE BIRTH

MICHIGAN DEPARTMENT OF HEALTH
Vital Records Section

BIRTH No. 121– Local File No.....

1. PLACE OF BIRTH a. COUNTY
2. USUAL RESIDENCE OF MOTHER (Where does mother live?) a. STATE b. COUNTY
b. CITY (If outside corporate limits, write RURAL and give township) OR VILLAGE
c. TOWNSHIP, CITY OR VILLAGE (Name of)
d. Is Residence within limits of a city or incorporated village? Yes ☐ No ☐
c. FULL NAME OF HOSPITAL OR INSTITUTION (If NOT in hospital or institution, give street address or location)
e. MAILING ADDRESS ZONE
3. CHILD'S NAME (Type or Print) a. (First) b. (Middle) c. (Last)
4. SEX
5a. THIS BIRTH Single ☐ Twin ☐ Triplet ☐
5b. IF TWIN OR TRIPLET (This child born) 1st ☐ 2nd ☐ 3rd ☐
6. DATE OF BIRTH (Month) (Day) (Year)

FATHER OF CHILD

7. FULL NAME a. (First) b. (Middle) c. (Last)
8. COLOR OR RACE
9. AGE (At time of this birth) YEARS
10. BIRTHPLACE (State or foreign country)
11a. USUAL OCCUPATION
11b. KIND OF BUSINESS OR INDUSTRY

MOTHER OF CHILD

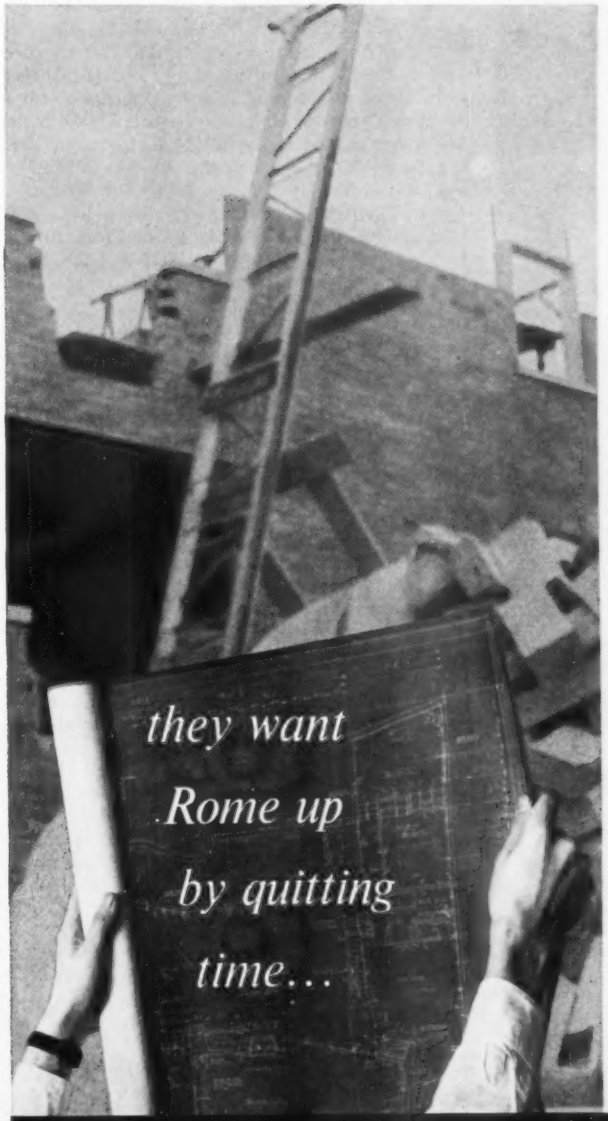
12. FULL MAIDEN NAME a. (First) b. (Middle) c. (Last)
13. COLOR OR RACE
14. AGE (At time of this birth) YEARS
15. BIRTHPLACE (State or foreign country)
16. CHILDREN PREVIOUSLY BORN TO THIS MOTHER (Do NOT include this child)
a. How many OTHER children are now living?
b. How many OTHER children were born alive but are now dead?
c. How many children were stillborn (born dead after 20 weeks pregnancy)?
17. INFORMANT'S NAME

I hereby certify that I attended the birth of this child who was born alive on the date stated above.
18a. SIGNATURE
18b. ATTENDANT AT BIRTH M.D. ☐ D.O. ☐ Midwife ☐ Other (Specify)
18c. ADDRESS
18d. DATE SIGNED
19. DATE RECEIVED BY LOCAL REGISTRAR
20. REGISTRAR'S SIGNATURE

FOR MEDICAL AND HEALTH USE ONLY
(This section MUST be filled out)

21a. LENGTH OF PREGNANCY Weeks
21b. WEIGHT AT BIRTH Lbs. Ozs.
22. LEGITIMATE Yes ☐ No ☐
23. HAVE EYES OF CHILD BEEN TREATED WITH ONE PERCENT SOLUTION OF SILVER NITRATE? Yes ☐ No ☐
24a. WAS MOTHER'S BLOOD TESTED FOR SYPHILIS DURING THIS PREGNANCY? Yes ☐ No ☐
24b. DATE OF TEST
24c. IF BLOOD NOT TESTED, STATE REASON
25a. STATE ANY COMPLICATIONS OF PREGNANCY AND LABOR
25b. STATE ANY OPERATION FOR DELIVERY
25c DESCRIBE ANY BIRTH INJURY
25d. DESCRIBE ANY CONGENITAL MALFORMATIONS

B-213



To cut daytime lethargy

(and keep rauwolfia potency)

in treatment of hypertension:

Mounting clinical evidence confirms the view that HARMONYL produces much less lethargy while reducing blood pressure effectively. In the most recent study[1], HARMONYL was evaluated in comparison with reserpine and other rauwolfia alkaloids. HARMONYL *was the only alkaloid which produced a hypotensive response closely matching that of reserpine, coupled with a greatly reduced rate of lethargy*. Only one HARMONYL patient in 20 showed lethargy, while an average of 11 out of 20 showed lethargy with reserpine, and 10 out of 20 with the alseroxylon fraction. Abbott

802077

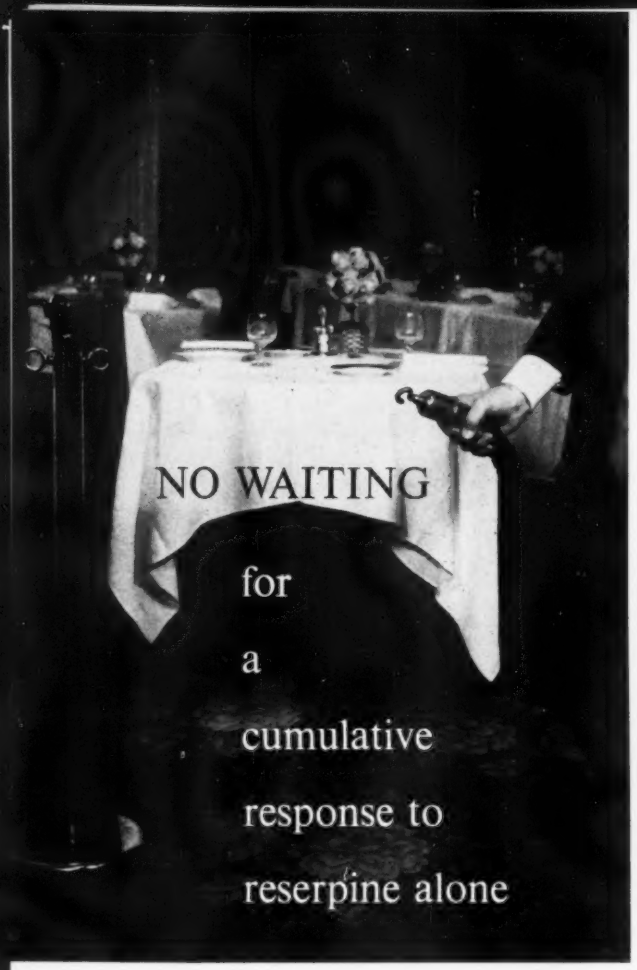
for your hypertensives who must stay on the job

Harmonyl®

(DESERPIDINE, ABBOTT)

while the drug works effectively . . . so does the patient

1. Comparative Effects of Various Rauwolfia Alkaloids in Hypertension. *Diseases of the Chest*, in press



in anxiety and hypertension

NEW *fast-acting*

filmtab

Harmonyl-N*

(Harmonyl* and Nembutal*)

Calmer days, more restful nights starting *first* day of treatment, through synergistic action of HARMONYL (Deserpidine, Abbott) and NEMBUTAL (Pentobarbital, Abbott). Lower therapeutic doses, lower incidence of side effects. Each HARMONYL-N Filmtab contains 30 mg. NEMBUTAL Calcium and 0.25 mg. HARMONYL. Each HARMONYL-N *Half-Strength* Filmtab combines 15 mg. NEMBUTAL Calcium and 0.1 mg. HARMONYL. Abbott

®Filmtab—Film-sealed tablets, Abbott; pat. applied for

601060 *Trademark

COMPLETION OF BIRTH CERTIFICATE

(Continued from Page 436)

Michigan shall, in the case of each woman so attended, take or cause to be taken a sample of blood of such woman at the time of first examination, and submit such sample to an approved laboratory for a standard serological test for syphilis." A blood sample taken the day of delivery or after delivery does not fulfill the legal requirement of this law. The only exception to this is if the patient is not seen prior to delivery. If such is the case, it should be so stated in Item 24c. In all other instances Item 24b indicates the date the blood sample was taken by the physician at the time of the patient's first prenatal visit.

4. The Certificate of Live Birth is a legal document. Only one original form shall be completed for any live born infant. The yellow hospital work sheet may be used for hospital or physician's records.

AMENDMENT TO COMMUNICABLE DISEASE RULES AND REGULATIONS

The following amendment to the communicable disease rules and regulations was approved by the Council of Health on December 12, 1957.

FOODBORNE DISEASES AND POISONINGS

1. Foodborne diseases and poisonings are hereby added to the list of reportable diseases.

2. *Reporting.*—It shall be the responsibility of each local health officer to investigate all foodborne diseases and poisonings, or suspected foodborne diseases and poisonings originating or reported in his jurisdiction and to report immediately to the Michigan Department of Health by telephone or telegram. If the investigation discloses that the source of the foodborne disease or poisoning is outside of the area of his jurisdiction, the investigating health officer shall also notify, by telephone or telegram, the local health officer having jurisdiction of the area. If the source of the foodborne disease or poisoning is located out of this state, it shall be the duty of the Michigan Department of Health to notify immediately the appropriate state official having jurisdiction.

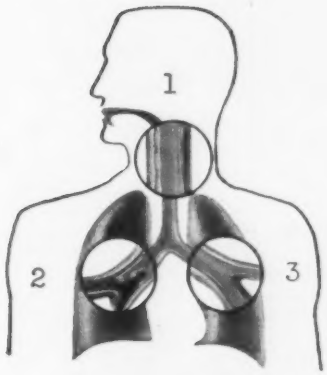
3. *Cases and Suspected Cases.*—All reported cases and suspected cases of foodborne diseases and poisonings shall be interviewed by the health officer or his representative who shall be responsible for conducting appropriate epidemiological studies. He shall keep the Michigan Department of Health informed as to epidemiological findings.

Health officers investigating foodborne diseases or poisonings shall obtain such samples as are necessary, and shall submit them in a manner approved by the state health commissioner to any of the Michigan Department of Health Laboratories or to a laboratory registered for bacteriologic and enteric diagnosis by the Michigan Department of Health.

SYMPOSIUM ON VENEREAL DISEASE

The Ninth Annual Symposium on Recent Advances in the Study of Venereal Diseases, sponsored by the U. S. Public Health Service, will be held May 12 and 13, 1958, at the Sheraton Hotel, Philadelphia, Pennsylvania. Michigan physicians are invited to participate in this symposium.

breaks up cough*



*Drawing shows how 3-pronged attack of Pyribenzamine Expectorant with Ephedrine breaks up cough by: (1) reducing histamine-induced congestion and irritation throughout the respiratory tract; (2) liquefying thick and tenacious mucus; (3) relaxing bronchioles. Pyribenzamine Expectorant with Codeine and Ephedrine also available (exempt narcotic). Pyribenzamine® citrate (tripelennamine citrate CIBA). C I B A

NEW *Immolin*®

CREAM-JEL matrix

"freezes," weakens and kills even the most viable sperm

The unique sperm-trapping matrix formed with explosive speed when semen meets IMMOLIN® Vaginal Cream-Jel accounts for the outstanding effectiveness of this *new* contraceptive for use without diaphragm.

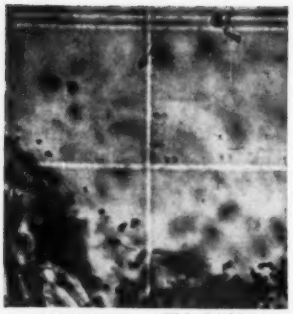
These unusual pictures, taken at high speed and magnification, show the IMMOLIN matrix in action – how a single sperm "freezes," weakens and dies – *within the distance it normally travels in one-quarter of a second.*

DEPENDABLE WITHOUT DIAPHRAGM—With this new contraceptive technique, a pregnancy rate of 2.01 per 100 woman-years of exposure is reported.* "This extremely low pregnancy rate indicates that IMMOLIN Cream-Jel used without an occlusive device is an efficient and dependable contraceptive."

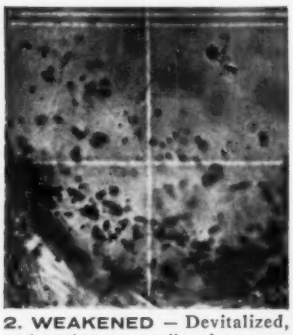
*Goldstein, L. Z.: Obst. & Gynec. *10*:133 (Aug.) 1957.

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423 West 55th Street, New York 19, N. Y.

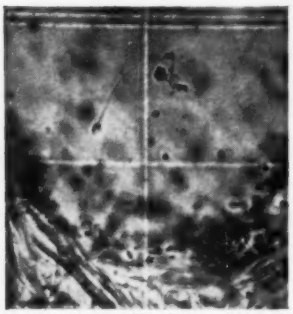
IMMOLIN is a registered trade-mark of Julius Schmid, Inc.



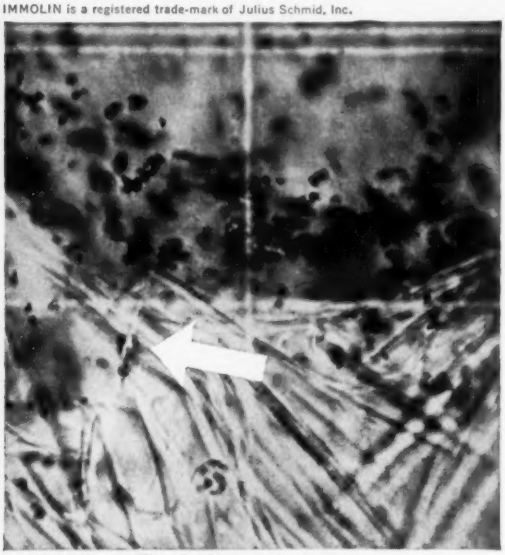
1. TRAPPED – This highly motile, viable sperm becomes non-reproductive the instant it contacts IMMOLIN Cream-Jel.



2. WEAKENED – Devitalized, and no longer motile, the sperm swerves from line of travel and is pulled aside by spreading matrix.



3. KILLED – Motion, whiplash stop as sperm succumbs to matrix.



4. BURIED – The dead sperm is trapped deep in the impenetrable IMMOLIN matrix.



IN ALL DIARRHEAS . . . REGARDLESS OF ETIOLOGY

comprehensive control with **CREMOMYCIN**®

SULFASUXIDINE® PECTIN-KAOLIN-NEOMYCIN SUSPENSION

SOOTHING ACTION . . . Kaolin and pectin coat and soothe the inflamed mucosa, adsorb toxins and help reduce intestinal hypermotility.

BROAD THERAPY . . . The combined antibacterial effectiveness of neomycin and Sulfasuxidine is concentrated in the bowel since the absorption of both agents is negligible.

LOCAL IRRITATION IS REDUCED and control is instituted against spread of infective organisms and loss of body fluid.

PALATABLE creamy pink, fruit-flavored CREMOMYCIN is pleasant tasting, readily accepted by patients of all ages.

* Sulfasuxidine is a trade-mark of Merck & Co., Inc.

MSD **MERCK SHARP & DOHME**
DIVISION OF MERCK & CO., Inc., PHILADELPHIA 1, PA.

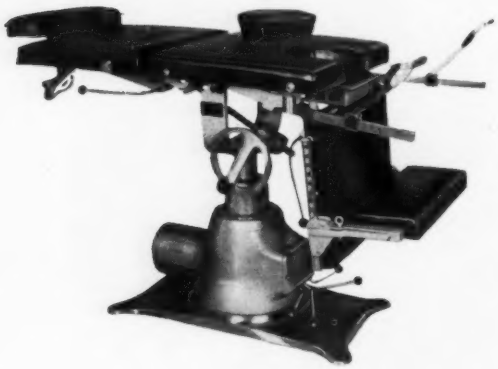
GREATER EASE in

EXAMINATION AND TREATMENT

with a

RITTER

UNIVERSAL TABLE



Greater flexibility in a treatment table can make your office practice easier, more efficient. Such is the Ritter Universal Table. Here is a table that reduces effort for both you and your patient. A touch of the toe to the convenient pedals floats the Ritter Table to the height desired. The motion of the table is barely noticeable, giving your patient a feeling of complete security at all times.

The flexibility of the Universal Table is practically unlimited. It provides unusually effective facilities for an improved rectal posture (inverted knee-chest), Gyn and many other positions, including a relaxed approach in the treatment of child or baby.

The extreme low position of the Ritter Universal Table enables the debilitated or the elderly patient to get onto the table without a painful and at times hazardous maneuver. Table rotation of 180° saves you many steps each day and the rotation lock holds the table in any desired position.

Expertly designed, carefully built, this Ritter Universal Table is a sound long-term investment in convenience and efficiency—everything about the table speaks quality from its eye-appealing exterior to its innermost working parts.

Call us today, and we will be glad to arrange a demonstration of this table at your convenience.

NOBLE-BLACKMER, INC.

267 W. Michigan 28148
Jackson, Michigan

In Memoriam

JOHN P. CONNOLLY, M.D., Detroit physician, died December 31, 1957, at the age of fifty-three. A native of Austria, Doctor Connolly came to Detroit in 1913. He was a graduate of the University of Detroit and the Detroit College of Medicine in 1933.

A staff member of Mount Carmel Hospital, he is survived by a brother, Frank O. Connolly, M.D. He was a member of the Knights of Columbus.

HUGH WILLIAM HENDRY, M.D., Detroit physician, died November 26, 1957, aged sixty-four. Born in Toronto, Ontario, he served with the Canadian Expeditionary Force in France, 1917-1918. Following his discharge from military service, Doctor Hendry entered the University of Toronto and obtained his medical degree from that institution in 1920. He interned at St. Michael's Hospital, Toronto.

He started in general practice and later specialized in ophthalmology for more than thirty-seven years.

Doctor Hendry was a member of the A.F. & A.M. (Toronto) and the Fraternal Order of Eagles.

ARTHUR S. PASTERNACKI, M.D., Adrian physician, died December 22, 1957, at the age of fifty-six. Born in Detroit, Doctor Pasternacki was a 1929 graduate of the Detroit College of Medicine. Starting his practice in Detroit and Wyandotte, he moved to Adrian in 1941.

Doctor Pasternacki served in the U. S. Army Medical Corps in Madison, Wisconsin, before going overseas in 1942 where he participated in the North African and Italian campaigns. He was stationed at Bizerte, Corsica and Sicily.

Discharged in 1945, he returned to Adrian where he was named Civilian Defense Medical Director in 1954.

Doctor Pasternacki was a member of Phi Beta Pi Medical Fraternity and St. Mary's Church of Adrian.

FRANK WILLIAM SCHWARZ, M.D., Battle Creek physician, died December 27, 1957, aged seventy. Doctor Schwarz had been in private practice in Battle Creek in general medicine and psychiatry since 1947, after a long career in Army medical service, with the U. S. Public Health Service and the Veterans Administration.

Doctor Schwarz was born in Philadelphia and received his B.S. degree from the University of Pennsylvania and was a 1917 graduate in medicine from Temple University. He was affiliated with the Veterans of Foreign Wars, the American Psychiatric Association, the Battle Creek Hunt Club and the Gull Lake Country Club.

How Old is Too Old for Tranquilizers ?

The psychological needs of the elderly confront physicians with one of their most perplexing problems. Perhaps no other patient group suffers so much from emotional distress. Yet, precisely because of their age, geriatric patients often seem beyond the reach of tranquilizing treatment.

When tranquilization seems risky . . .

They are too much beset by complicating chronic ailments, too susceptible to serious side effects. Ataraxia is clearly indicated, yet the doctor cannot risk side reactions on liver, blood or nervous system.

Is there an answer to this dilemma?

We feel there is. In four recent papers investigators have reported good results with ATARAX in patients up to 90 years of age.* In one study, **improvement was "pronounced" in 76%, "good" in an additional 18.5%.*** ATARAX has been successfully used in such cases as senile anxiety, agitation, hyperemotivity and persecution complex.* On ATARAX, patients became ". . . quieter and more manageable. They slept better and demonstrated improved relations with other patients and hospital personnel. Even their personal hygiene improved, and they required less supervisory management."*

. . . ATARAX is safe

Yet even in the aged, ATARAX has given "no evidence of toxicity. . . . Complete liver function tests and blood studies were made on all patients after two months of therapy. . . . There were no significant abnormalities."* With still other elderly patients "tolerance to the drug was excellent, even in cases where the patients were given relatively high doses."* Similarly, no parkinsonian effects have been observed on ATARAX therapy.

Nor does ATARAX make your patients want to sleep all day. Instead, they can better take care of themselves, because ATARAX leaves them both calm and alert. In sum, ATARAX ". . . does not impair psychic function and has a minimum of side effects. . . . It appears that ATARAX is a safe drug. . . ."*

These, undoubtedly, are the results you want when emotional problems beset your geriatric patients. For the next four weeks, won't you prescribe tiny ATARAX tablets or pleasant-tasting ATARAX syrup — both so readily acceptable to the elderly.

*Documentation on request

ATARAX®
(BRAND OF HYDROXYZINE)

M. A. Seidel M.D.
Medical Director

ROERIG
New York 17, New York
Division, Chas. Pfizer & Co., Inc.

ATARAX
in any hyperemotive state

for childhood behavior disorders
10 mg. tablets—3-6 years, one tablet t.i.d.; over 6 years, two tablets t.i.d. Syrup—3-6 years, one tsp. t.i.d.; over 6 years, two tsp. t.i.d.

for adult tension and anxiety
25 mg. tablets—one tablet q.i.d. Syrup—one tbsp. q.i.d.

for severe emotional disturbances
100 mg. tablets—one tablet t.i.d.

for adult psychiatric and emotional emergencies
Parenteral Solution—25-50 mg. (1-2 cc.) intramuscularly, 3-4 times daily, at 4-hour intervals. Dosage for children under 12 not established.

Supplied: Tablets, bottles of 100. Syrup, pint bottles. Parenteral Solution, 10 cc. multiple-dose vials.



. . . . . NEWS MEDICAL

MICHIGAN AUTHORS

Chandler Smith, M.D., Saginaw, is the author of an editorial entitled, "The Mongoose and the Cobra," published in *Surgery, Gynecology and Obstetrics*, December, 1957.

William S. Carpenter, M.D. and **Paul J. Connolly, M.D.**, Detroit, are the authors of an article entitled "Surgical Management of Chronic Ulcerative Colitis," published in AMA *Archives of Surgery*, January, 1958.

William J. Fulton, M.D., Detroit, is the author of an article entitled "Medical Department Layout and Design," published in *Industrial Medicine and Surgery*, January, 1958.

Wilfred N. Sisk, M.D., **K. Ann Locher, M.T.(ASCP)** and **Eleanor I. Titus, M.T.(ASCP)**, Kalamazoo, are the authors of an article entitled "The Value of Early Diabetes Detection," published in *Industrial Medicine and Surgery*, January, 1958.

Carey P. McCord, M.D. and **Warren A. Cook, M.D.**, Ann Arbor, are the authors of an article entitled "A Classification System for Lantern Slides and Other Visual Aids in Occupational Health," published in *Industrial Medicine and Surgery*, January, 1958.

Edwin J. DeCosta, M.D., is the author of an article entitled "The Thyroid Gland in Obstetrics and Gynecology," published in THE JOURNAL of the Michigan State Medical Society and condensed in the *American Practitioner and Digest of Treatment*, January, 1958.

Harry Lamb, M.D., Sturgis, is the author of an article entitled "About Obesity," published in *GP*, January, 1958.

Morris Dworski, M.P.H., **George E. Wilson, M.D.**, **Homer W. McCreary, M.D.**, Saranac Lake, New York, and **Anthony B. Delahant**, Saranac Lake, New York, and **Gerrit W. Schepers, M.D.**, Ann Arbor, are the authors of an article entitled "Fatal Pulmonary Disease Caused by an Atypical Acid-Fast Bacillus," published in *Industrial Medicine and Surgery*, December, 1957.

Martin F. Bruton, M.D., F.A.C.P., and **Marion W. Jocz, M.D.**, Detroit, are the authors of an article entitled "Myocardial Infarction," published in *Industrial Medicine and Surgery*, December, 1957.

Francis D. Murphy, M.D., is the author of an article entitled "Diagnosis and Treatment of Acute Coronary," published in THE JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY, August, 1957, a quote from which appears in *Current Medical Digest*, November, 1957.

John P. Gallagher, M.D., Washington, D.C., and **Franklin E. McCoy, M.D.**, Mount Pleasant, are the authors of an article entitled "Subdural Empyema" published in *Medical Annals of the District of Columbia*, November, 1957.

J. P. Gray, M.D., Detroit, is the author of an article entitled "The Medical Writer's Part in Keeping the Practicing Physician in Step with Modern Scientific Advances," presented at the fourteenth annual meeting of the American Medical Writers Association in St. Louis, September, 1957, and published in *Mississippi Valley Medical Journal*, January, 1958.

Charles W. Sellers, M.D., Detroit, is the author of an article entitled "The Fallacy of Retirement," selected for presentation in the contest on non-medical writing conducted in connection with the fourteenth annual meeting, American Medical Writers Association, St. Louis, September, 1957, and published in the *Mississippi Valley Medical Journal*, January, 1958.

Leo S. Figiel, M.D., and **Steven J. Figiel, M.D.**, Detroit, are the authors of an article entitled "Ileo-Cecal Intussusception in the Adult," published in the *American Journal of Roentgenology, Radiotherapy and Nuclear Medicine*, October, 1957.

Steven J. Figiel, M.D., and **Leo S. Figiel, M.D.**, Detroit, are the authors of an article entitled "Herpes Zoster with Ileus Simulating Intestinal Obstruction," published in the *American Journal of Medicine*, December, 1957.

Sidney W. Hoobler, M.D., Ann Arbor, is the author of an article entitled "Practical Plan for Long-Term Treatment of Hypertension," read in the Panel and Symposium on the Uses and Abuses of New Drugs and Antibiotics in Therapy before the Section on General Practice at the 106th meeting of the American Medical Association, New York, June, 1957, and published in the *Journal of the American Medical Association*, December 28, 1957.

Richard C. Bates, M.D., **Robert B. Jennings, M.D.**, and **David P. Earle, M.D.**, Lansing, are the authors of an article entitled "Acute Nephritis Unrelated to Group A Hemolytic Streptococcus Infection," published in the *American Journal of Medicine*, October, 1957.

Daniel J. Leithouser, M.D., Detroit, is the author of an article entitled "A Survey on Early Ambulation after Surgery," published in *Surgery, Gynecology and Obstetrics*, January, 1958.

J. P. Gray, M.D., Detroit, is the author of an article entitled "Report of Visiting Lecturer on Medical Writing, American Medical Writers Association, during 1956-1957," presented at the fourteenth annual meeting, American Medical Writers Association, St. Louis, September, 1957, and published in the *Mississippi Valley Medical Journal*, January, 1958.

Ruth Good, Assistant Editor, *University of Michigan Medical Bulletin*, Ann Arbor, is the author of an article

(Continued on Page 446)



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1. Pollock, B. E., and Pruitt, F. W.: Am. J. M. Sc., 226:172, 1953.

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(Continued from Page 444)

entitled "Medical Writing: Nonhelpful Precepts," published in the *Mississippi Valley Medical Journal*, January, 1958.

Samuel J. Levin, M.D., William Roubeck, M.D., and **David Kliger, M.D.,** are authors of an article entitled "Comparison of the Rate of Absorption of Subcutaneously and Intramuscularly Injected Phenolsulphonphthalein," which appeared in the *Annals of Allergy*, December, 1957.

Kouighi R. Tanaka, M.D., and **George O. Clifford, M.D.,** Detroit, are the authors of an article entitled "Spontaneous Remission in Pernicious Anemia," published in the *New England Journal of Medicine*, January 2, 1958.

Marshall W. Alcorn, M.D., Bay City, is the author of an article entitled "Management of Uremia," published in *Clinical Medicine*, November, 1957.

Leopold Liss, M.D., and **J. Reimer Wolter, M.D.,** Ann Arbor, are the authors of an article entitled "The Histology of the Glioma of the Optic Nerve," published in A.M.A. *Archives of Ophthalmology*, November, 1957.

Michael N. Zelenock, M.D., Robert D. Larsen, M.D., and **Joseph L. Posch, M.D.,** Detroit, are the authors of an article entitled "Treatment of Fractures of the Hand," read at the fourteenth annual meetings of the Central Surgical Association, Chicago, February, 1957, and published in AMA *Archives of Surgery*, September, 1957.

James A. Maher, M.D., Ann Arbor, is the author of an article entitled "A Statistical Study of Lymphoblastoma in the Necropsy Series at the University of Michigan Hospital," published in the *University of Michigan Medical Bulletin*, November, 1957.

W. W. Coon, M.D., J. W. Mackenzie, M.D., and **P. E. Hodgson, M.D., F.A.C.S.,** Ann Arbor, are the authors of an article entitled "A Critical Evaluation of Anticoagulant Therapy in Peripheral Venous Thrombosis and Pulmonary Embolism," published in *Surgery, Gynecology and Obstetrics*, February, 1958.

Philip A. Riley, Jr. Captain, MC, USAR (now of Jackson, Michigan), **Basel M. Mixon, Jr., Major, MC, USA,** and **Timonthy G. Barila, Major, MC, USA,** Washington, D. C., are the authors of an article entitled "Antifibrillary Drugs for Deep Hypothermia in the Dog" published in *Surgery*, St. Louis. November, 1957.

William D. Robinson, M.D., Ann Arbor, is the author of an article entitled "Nutrition and Joint Disease," published in the *Journal of the American Medical Association*, January 18, 1958.

Clayton K. Stroup, M.D., F.A.C.G., and **Donald K. Pine, M.D.,** Flint, are the authors of an article entitled "Pneumoperitoneum after Gastroscopy," published in the *American Journal of Gastroenterology*, January, 1958.

B. K. Bagchi, Ph.D., William D. Robinson, M.D., and **Jere M. Bauer, M.D.,** Ann Arbor, are the authors of an article entitled "Electroencephalographic Changes in a Case of Vitamin D Intoxication," published in the *University of Michigan Medical Bulletin*, December, 1957.

(Continued on Page 448)

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(Continued from Page 446)

E. C. Pierson, Ph.D., M.D., and **S. W. Hoobler, M.D.,** Ann Arbor, are the authors of an article entitled "Significance of Transient Encephalopathy in Cases of Benign Hypertension," published in the *University of Michigan Medical Bulletin*, December, 1957.

Saul I. Harrison, M.D., Ann Arbor, is the author of an article entitled "Modus Operandi of Psychoanalysis," published in the University of Michigan *Medical Bulletin*, December, 1957.

Harry M. Nelson, M.D., Detroit, Past President of the American Cancer Society and current Chairman of the Michigan Cancer Co-ordinating Committee, is the author of "Exfoliative Cytology in the Detection of Uterine Cancer," published in the *Bulletin of the American College of Surgeons*, December, 1957. Dr. Nelson is also author of "Periodic Health Checkups and Cancer" published in *Medical Times*, November, 1957, and "The Present Status of Exfoliative Cytology in the Control of Uterine Cancer," published in the *University of Michigan Medical Bulletin*, November, 1957.

The World Medical Association will hold its twelfth General Assembly in Copenhagen, Denmark, August 15-20, 1958. The United States Committee, now in its tenth year, secured 797 new members in 1957. The U. S. Committee will hold another meeting at the American Medical Association convention in San Francisco in June, 1958.

* * *

The Basic Course for Orthoptic Technicians, sponsored by the American Orthoptic Council, will be moved from its previous location in Iowa City to the University of Michigan at Ann Arbor for the summer session this year. The course will be held from June 23 to August 16, and the students will be housed in the University dormitories, with the lectures being given at the University Hospital under the sponsorship of the Department of Ophthalmology. Anyone interested in writing for further details of the course should address their inquiries to Dr. John W. Henderson, Department of Ophthalmology, University Hospital, Ann Arbor, Michigan.

* * *

Max K. Newman, M.D., Detroit, has presented three talks recently: (1) "The Rehabilitation of the Geriatric Patient," presented at the Veterans Administration Hospital, Fort Wayne, Indiana, December 16, 1957; (2) "Neurological Signs and Symptoms of the Aged," presented at the Jewish Home for the Aged, Detroit, on January 16, 1958, and (3) "Occupational Hazards of Practicing Dentists—The Myofascial Syndromes," presented before the Northern Section of the Detroit District Dental Society, January 21, 1958.

* * *

The American College of Allergists will hold its Fourteenth Congress and Graduate Instructional Course in Allergy on April 20-25, 1958, at the Shelburne in Atlantic City, New Jersey. For further information, write to The American College of Allergists, John D. Gillaspie, M.D., 2049 Broadway, Boulder, Colorado.

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Poliomyelitis.—One year ago, representatives from every state medical society in the country met in Chicago to offer their services to the AMA polio inoculation campaign to protect every person under forty. Vaccine supplies are now plentiful. 41,300,000 cc. were on hand at the latest U. S. Public Health Service count, January 1, 1958.

The polio campaign must be a continuing effort. Thirty-five million inocculation appointment cards are being distributed during the NFIP door-to-door "Mothers' March on Polio." These are post cards which families send to doctors requesting appointments for polio shots. Physicians and their secretaries should be on the lookout for these cards in their daily mail and set up appointments promptly when they are requested. Cards state that "your doctor will tell you what it costs to get vaccinated."

Last year, the number of paralytic polio cases was only 32 per cent of the 1956 total. We can cut the incidence even more sharply next summer by plunging energetically into "Operation Cleanup" this spring. That briefly is the message of Julian P. Price, M.D., Chairman, AMA Committee on Poliomyelitis, January 26, 1958.

* * *

Tribute to TB Workers.—On December 12, 1957, at Lansing, the Michigan Tuberculosis Association honored at a luncheon, Harry D. Bennett, treasurer, and Theodore J. Werle, executive secretary, both having served for thirty-five years and both now retiring. They were cited for their leadership in the Michigan Tuberculosis movement and both were given a memory book and gift. The Michigan State Medical Society headquarters staff members have co-operated with these two men over many years and wish to add their felicitations.

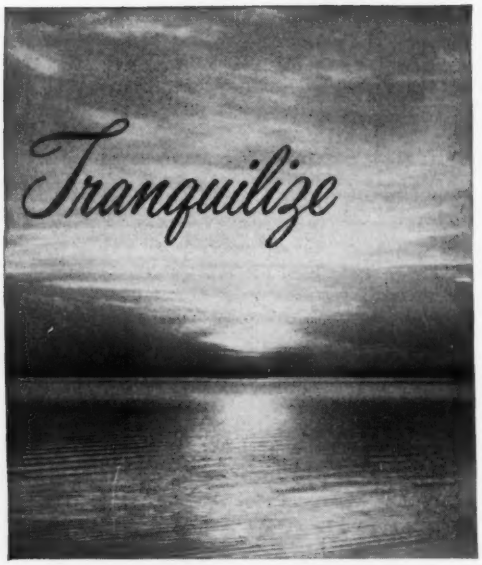
* * *

The Rains Again.—The National Library of Medicine News of February, 1958, again tells the story of rain damage:

"Throughout December the rains in the Washington area were twice the normal amount, and with the rains came water in the basement stacks of the National Library of Medicine. A few shelves of books in the most dangerously threatened area were moved; unfortunately, all cannot be moved. Lacking space, odd alternatives such as coating the books with an anti-mildew mixture of copper sulfate have been considered, especially for those books in the dampest sections of the stacks.

"Early in January the Executive Officer of the National Library of Medicine and the Superintendent of the Mall Group of buildings, Public Buildings Service, made an extensive inspection of the situation; as a result of their survey, several actions will be taken. An attempt will be made to waterproof the interior west wall of the basement stacks, and a concrete splash pan will be constructed on the exterior of the wall to eliminate seepage; all interior downspouts remaining in the building will be capped and replaced with exterior downspouts. The interior west wall of the upper stack area will be replastered and repainted. In addition, some gratings in the main stack will be replaced, and ex-

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terminators will turn their attention from the plague of rats, now somewhat abated, to incursions being made by cockroaches and silverfish."

* * *

Edward W. Schoenheit, M.D., President of the North Carolina State Medical Society, devoted his whole President's page to his trip to Michigan attending our annual meeting in September and receiving at first hand the information available.

He says:

"I desire to plead that we do everything possible to maintain voluntary insurance plans, and I believe that without Blue Shield plans, compulsory health insurance would already have been forced upon us. Many physicians in our state are dissatisfied with our present Blue Shield plan, as evidenced by the fact that less than 50 per cent are willing to participate in it. Many have commented that they would just as soon have socialized medicine as our present Doctor's Plan.

"Most of us agree that we would rather practice under the old order, without insurance, we a fee-for-service arrangement; however, we must face the fact that times have changed and some sacrifice will have to be made. Blue Shield plans offer a co-operative effort to satisfy the public and render satisfactory service, and will insure the maintenance of our doctor-patient relationship."

* * *

The General Practitioner Education Project, jointly sponsored by the American Psychiatric Association and the American Academy of General Practice, is interested in the development of postgraduate psychiatric education for the family physician. One of the services which is offered by the project is a Speakers Bureau, which is prepared to offer names of psychiatrists who are willing to serve as guest lecturers while they are taking their vacation trips. Medical societies, hospitals, and others interested in obtaining names of psychiatric speakers, are requested to write the G. P. Project, American Psychiatric Association, 1785 Massachusetts Avenue, N.W., Washington, D. C.

* * *

The Wisconsin Academy of General Practice is accepting applications for scientific exhibits at the Academy's annual assembly, September 15-16, 1958.

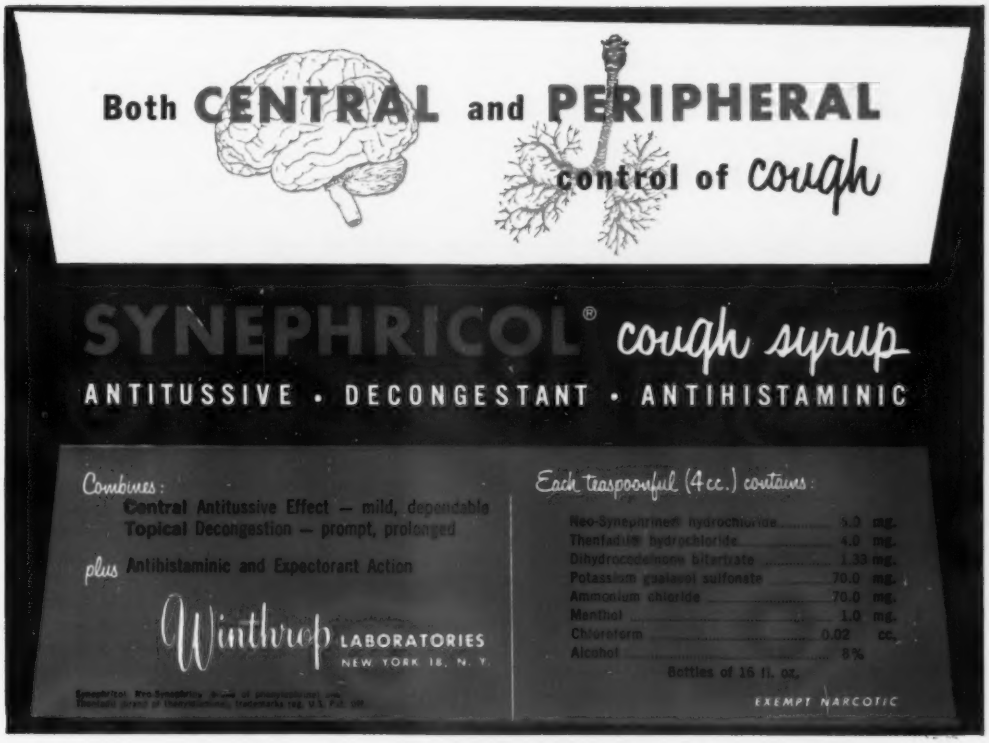
Approximately twenty scientific exhibits will be accepted for the two-day meeting, which will be at the Milwaukee Auditorium. Scientific exhibits will be in Bruce Hall of the Auditorium. About 450 family doctors will attend the assembly.

Dr. Charles J. Picard, of Superior, scientific assembly chairman, said the Academy is setting aside more space for scientific exhibits because it realizes the importance in helping family doctors keep up to date with the latest developments in modern medicine. All applications will be screened by Dr. Picard's committee.

The exhibit spaces are 10 feet by 10 feet, and the Academy will provide back and side drapes, a booth sign, and electric current. Booth space will be provided without cost for those scientific exhibits accepted.

Medical schools, clinics, hospitals or individual physicians desiring further information or wishing to apply may write to Robert A. Dufour, Executive Secretary, Wisconsin Academy of General Practice, 758 N. 27th Street, Milwaukee 8, Wisconsin.

(Continued on Page 452)


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The E. G. Gill Eye and Ear Foundation is conducting its thirty-first annual Spring Congress in Ophthalmology, Otology, Rhinology, Laryngoscopy, Facio-maxillary Surgery, Bronchoscopy and Esophagoscopy, April 14 through 19, 1958, at Roanoke, Virginia. A wonderful program.

* * *

The Third International Congress of Allergy will be held in Paris, France, October 19 to 26, 1958. It is sponsored by the International Association of Allergology and the French Allergy Association. The program will consist of symposia on asthma and emphysema, immunology, recent clinical advances, biochemical aspects, auto-immune reactions, dermatology and socio-economics aspects. Participants are world authorities in special fields. There will be sectional papers limited to ten minutes, on any phase of allergy, also round table small groups luncheon conferences on selected subjects led by international authorities and both pre and post convention tours. An enjoyable social program has also been arranged. For information, write Samuel Feinberg, M.D., 303 East Chicago Avenue, Chicago, Illinois.

* * *

Poison Information Center.—The University of Michigan Department of Medicine announces the establishment of a poison information and therapy center at the University Hospital to be added as a service to the physicians of the state who may need fast information on poisons and antidotes or whose patients, especially children, have become sick from swallowing mysterious substances lying around the house—deodorants, detergents, weed killers, rat poison, insecticides, household drugs and even bubble bath soap, may demand immediate information. The establishment of this center, under the direction of George H. Lowrey, M.D., will be a real service to the people of the State of Michigan, with trained and training physicians and residents on the staff of the University skilled in the treatment and diagnosing of poisoning on call. All available information will be subject to call, even in emergencies when a doctor is not immediately available.

For the poison Information Center, telephone University Hospital, NOrmandy 3-1531. Ask for emergency service poison center. This service could result in the saving of many lives.

* * *

A Public Health Service roundup on poliomyelitis statistics for 1957 shows 5,894 cases of all types compared with 15,419 in 1956 and 29,270 in 1955.

* * *

The University of Michigan School of Public Health received a grant of $136,155 supported by the March of Dimes program to carry on the search for new anti-polio drugs. Dr. Thomas Francis, Jr., will be in charge of the program. According to Dr. Francis, the secondary aim of the project is to advance understanding of what the basic mechanisms of virus infection are. This may in the long run prove even more important than the discovery of drugs effective against poliomyelitis.

(Continued on Page 454)



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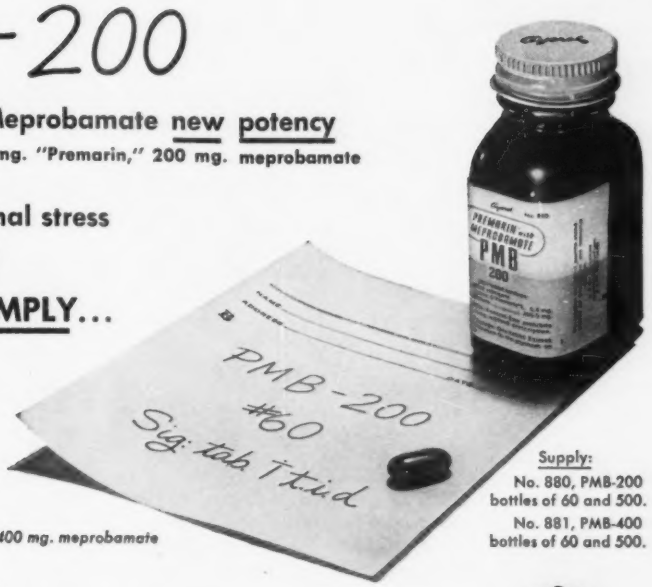
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F. A. COLLER, M.D. ASSOCIATED IN SURGERY WITH DR. REGAN



Fredrick A. Coller, M.D. and William J. Regan, M.D., both of Ann Arbor, became associated as general surgeons on the staff at St. Joseph Mercy Hospital, Ann Arbor, on February 1, 1958.

Doctor Coller retired as Chairman of the Department of Surgery at University of Michigan Medical School last July after holding the post for twenty-seven years. He has been associated with the University since 1920, having joined the staff shortly after military service in World War I. At the present time, he is continuing as Professor of Surgery and as lecturer in the "History of Medicine," as well as consultant to the Medical School faculty. Doctor Coller's plans for the future also include a medical museum for the University and a continuation of research projects in the field of cancer.

A native of South Dakota, Doctor Coller received his M.D. degree from Harvard Medical School in 1912, and served an internship and residency at Massachusetts General Hospital, Boston.

Doctor Regan, an instructor in surgery at the University of Michigan since 1951, graduated from the University of Pennsylvania School of Medicine in 1949. He is a member of Alpha Omega Alpha, Sigma Xi, the Fredrick A. Coller Society and is a Diplomate of the American Board of Surgery.

* * *

The Health Information Foundation has announced the results of a two-year study of a major problem still confronting voluntary health insurance plans. This report, made January 15, 1958, will be published by the Harvard University Press, Cambridge, Massachusetts. The report states that at the start of 1955, almost two-thirds of the U.S. population had some type of health insurance protection. The great majority of insured persons were covered by employe groups.

Thirty-five per cent of the United States population are not eligible for group coverage because of their employment problems. Only one quarter of these non-eligible persons were enrolled in Blue Cross-Blue Shield, or other health insurance plans on a non-group basis.

Non-group enrollment presents problems for those selling voluntary health insurance. First, there is no automatic payroll deduction; second, non-group subscribers often include a high proportion of individuals who have greater-than-average utilization rates for hospital services. Many Blue Cross-Blue Shield plans have worked out ways of encouraging non group enrollment without upsetting their administrative and actuarial structure: (1) community enrollment on a county or smaller basis with a stated percentage of population

(Continued on Page 456)

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* J.A.M.A. *166*:158,1958; Welsh, A. L. and Ede, M. "...prompt remissions of ... acute phases." with TARCORTIN

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* 1. Clyman, S. G.: Postgrad. Med. *21*:309, 1957.
2. Bleiberg, J.: J. M. Soc. New Jersey *53*:37, 1956.
3. Abrams, B. F. and Shaw, C.: Clin. Med. *5*:839, 1956.
4. Welsh, A. L., and Ede, M.: Ohio State M. J. *50*:837, 1954.
5. Bleiberg, J.: Am. Practitioner *8*:1404, 1957.

(Continued from Page 454)

required; (2) community enrollment on a county basis with no stated percentage of the population required; (3) continuous year-round or "over-the-counter" enrollment on an individual sales basis; (4) periodic "open" enrollment on a plan-wide basis or less than plan-wide but larger than county-wide; (5) group enrollment of non-employe groups such as farmers, fraternal and professional organizations, and others.

The problem still remains: too small a percentage of these people are being enrolled.

* * *

Alfred Blalock, M.D., will present the William J. Mayo Lecture at the University of Michigan on March 26, 1958, at 8:30 P.M. in the Horace H. Rackham School of Graduate Studies.

Dr. Alfred Blalock, professor of surgery at the Johns Hopkins University and surgeon-in-chief at the Johns Hopkins Hospital, is noted for his operation on "blue babies." At the University of Michigan, he will give a lecture on "Surgery of the Heart and Great Vessels."

The William J. Mayo lectureship series is sponsored by the University of Michigan department of surgery and was endowed in 1924.

* * *

The Genesee County Medical Society will hold its Tenth Annual Cancer Day, Wednesday, April 9, 1958, at Hurlay Hospital, Flint, at 9:00 a.m. Speakers include Benjamin Felson, M.D., Cincinnati; Edgar L. Frazell, M.D., New York City; Eugene M. Bricker, M.D.; St. Louis, Mo.; Robert C. Horn, M.D., Detroit; Alfred Gellhorn, M.D., New York City; and I. S. Ravdin, M.D., Philadelphia.

* * *

The Women's Auxiliary of the Michigan State Medical Society issued Volume I, No. I of *The Auxilium* in December, 1957. This takes the place of the former *Auxiliary News*, which was published sporadically over several years. The first number contains four pages, attractively done on heavy white paper, and folds to letter size. It is a well printed, very readable, newsy bulletin, and contains a listing with the addresses of the advisory committee, the officers, and the various committee chairmen. Warren F. Tryloff, Associate Public Relations Counsel, is assisting in this work.

* * *

The Health Information Foundation will conduct a nation-wide survey of medical costs and voluntary health insurance during 1958. The survey will be conducted and sponsored jointly by HIF (Health Information Foundation) and the National Opinion Research Center of the University of Chicago will represent a re-survey, paralleling that which the Foundation conducted in 1953. The new study will provide a basis for comparing data on medical expenditures, utilization of medical services and patterns of health insurance coverage in 1953 and the present.

* * *

The Social Security Administration will study a group of 3,000 newly retired persons over a twelve-year period

(Continued on Page 458)



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*REFERENCE: J.A.M.A. 163: 359, 1957 (February 2)

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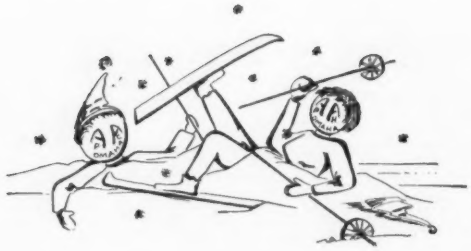
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(Continued from Page 456)

beginning early this year. The purpose of the study is to determine facts on the income, saving, housing, health, employment, major expenditures and various activities of retired persons. Interviews will be conducted at intervals of from one to two years, beginning with the year in which the persons interviewed apply for social security benefits. How retired persons pay for health care and the nature of their expenditures for such care is identified as a major question in this study.—*Blue Shield Newsletter*, Volume 3, Number 1.

* * *

Standing Orders for Nurses in a Mass Disaster.—In the December JOURNAL (pages 1508, 1510 and 1519), was published a set of rules and standing orders which have been agreed upon for the use of nurses in mass disasters. These come from the medical and public health division of Civil Defense and were endorsed by the Michigan State Medical Society Committee on Civil Defense and by The Council.

In a letter to the editor, Dr. Carleton Fox, a maxillofacial surgeon, who has been a member of the Board of Directors of Michigan Medical Service for over ten years, called attention to one very important first aid precaution which has been overlooked.

"In World War I, as well as in the last two wars, many of the casualties were of the face, and especially of the lower face, involving the mandible and tongue. Many of these men died for lack of an adequate air way, due to improper first aid and transportation. Item B of instruction VIII is correct, but an all-important order has been neglected, namely: All patients with macerations of the lower face, including the tongue, should not be transported on their backs, with the head to one side, but rather face down or in a sitting position with the head bent forward."

It is suggested that this note be added to the information published.

* * *

American Board of Obstetrics and Gynecology.—The next scheduled examinations (Part II), oral and clinical for all candidates eligible, will be conducted at the Edgewater Beach Hotel, Chicago, Ill., by the entire Board from May 7 through 17, 1958. Formal notice of the exact time of each candidate's examination will be sent him in advance of the examination dates.

Candidates who participated in the Part I Examinations will be notified of their eligibility for the Part II Examinations at the earliest possible date.

Current Bulletins of this Board may be obtained by writing to: Robert L. Faulkner, M.D., Secretary-Treasurer, American Board of Obstetrics and Gynecology, 2105 Adelbert Road, Cleveland 6, Ohio.

* * *

Gifts and grants to Wayne State University reached a new high during the fiscal year 1956-57, according to totals released recently by Olin E. Thomas, University vice president and treasurer.

More than $3,100,000 was received by the University during the year, exceeding last year's total of more than $2,500,000 by 25 per cent.

The annual report also showed that the number of contributors rose to 407, more than doubling over the past two years.

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Grants for instruction and research totalled approximately $2,387,000 of which $901,000 was in government contracts.

Capital gifts exceeded $586,000. Gifts for scholarships, fellowships, loan funds and wards came to more than $196,000, an increase of 50 per cent over a year ago.

An additional $44,000 for research, instruction and student aid was received from the Wayne University Foundation.

* * *

Wayne State University has started a unique pilot program that will result in more student housing on campus.

An apartment house, the Glenn Manor at 645 Merrick, is being redecorated for use by College of Nursing students. The Glen Manor, recently acquired by the University for $134,000, is within walking distance of all points on campus.

The University plans to assign three to five women to an apartment, with a maximum of eighty-six students in the building.

* * *

Medical Officers Released.—Due to the reduction in the Army's strength this fiscal year, a certain number of Army medical and dental officers scheduled to complete their two-year service agreements between February 1 and August 31, 1958, may be able to return to civilian status after twenty-one months of active duty, Major General Silas B. Hays, Surgeon General of the Army, announced.

Since this is a voluntary program the exact number to be affected by this ruling will not be known until reports have been received in Washington from the field. Notification by Department of Army Message 304795, 15 January, 1958, of the provision for earlier release has been sent to medical installations around the globe where officers, under voluntary or involuntary agreement, are stationed.

Written requests for this earlier release must be filed by the medical or dental officer with his local commander by February 10, 1958. Applications will be approved only where release of the officer will not interfere with carrying out the mission of the Army Medical Service.

General Hays emphasized that this is a one-time voluntary program and is to apply only to those medical and dental officers whose actual separations could be effected by June 30, 1958.

* * *

MSMS Public Relations Counsel Hugh W. Brenneman was guest speaker at the annual banquet of the Michigan Practical Nurses Association regional meeting in Lansing, January 20. Mr. Brenneman's topic was, "It's All in How You Look at It."

* * *

"Revolutions in Medicine" is the title of an address, now in beautiful brochure form, presented by C. Howard Ross, M.D. of Ann Arbor, before the Washtenaw Historical Society November 13. The manuscript is on file with the Michigan Historical Collection and is an excellent example of interesting reading in the field

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of medical history, both ancient and modern. The worthy opus is dedicated, among others, to Frederick A. Coller, M.D., and the late Reuben Peterson, M.D.

* * *

Basic Science Examinations.—The report of examinations in the basic sciences, for the year 1957, indicate that 575 applicants were examined, that 434 were certified and 141 failed.

* * *

The Fourth Annual Nutrition Conference will be held at the Wayne State University College of Medicine, April 24 and 25, 1958.

"PROTEINS IN NUTRITION"

Thursday Evening, April 24—Lafayette Clinic Auditorium

8:00 p.m.—"Biochemical Aspects of Meat Preservation"
F. E. DEATHERAGE, Ph.D., Chairman of the Department of Agricultural Biochemistry, Ohio State University.

Friday, April 25—College of Medicine Auditorium

11:00 a.m.—"Protein Deficiency, Kwashiorkor, in Man"
N. S. SCRIMSHAW, Ph.D., M.D., Director of the Instituto de Nutricion de Centro America, Guatemala.

2:00 p.m.—"Factors Influencing Amino Acid Utilization"
E. E. RICE, Ph.D., in charge of Nutrition Research, Swift and Company.

3:00 p.m.—"Amino Acid Balance in Nutrition"
C. A. ELVEHJEM, Ph.D., Chairman of the Department of Physiological Chemistry and Dean of the Graduate School, University of Wisconsin.

Members of the Michigan State Medical Society are cordially invited.

* * *

The Lawrence Reynolds Library of the University of Alabama was dedicated on February 2 in Birmingham. The library is named for Lawrence Reynolds, M.D., of Detroit, Clinical Professor of Roentgenology at the University of Michigan, and a native of Alabama. Congratulations, Doctor Reynolds!

* * *

The 90th Clinic Day and Alumni Reunion of Wayne State University's College of Medicine will be held Wednesday, May 7, at the Hotel Fort Shelby in Detroit. Registration begins at 8:00 a.m.

Leonard A. Scheele, M.D., Wayne Medical School alumnus and former Surgeon General of the United States, will speak at the morning session on "State of the Nation's Health and National Health Problems."

A Surgical Symposium on "Biliary Tract Disease" and a Medical Writing Workshop will also be morning session features.

John S. DeTar, M.D. of Milan, Michigan, will lead off the afternoon program with a talk on "Cancer Detection in the Office of the Generalist." Carl A. Moyer, M.D., of St. Louis, Missouri, will speak on the "Acute Interstitial Pancreatitis—Fact or Fiction." A panel discussion on "Care of the Diabetic Pregnant Patient" will close the scientific program.

A reception is planned for 6:15 p.m. followed by a banquet at 7:00 p.m.

Individual class reunions are being arranged for Tuesday evening, May 6, according to Homer Strong, director of Alumni Relations.

* * *

Thomas Francis, Jr., M.D., Ann Arbor, assumed the Presidency of the U. S. Armed Forces Epidemiological Board on January 1.

* * *

Russell N. DeJong, M.D., Ann Arbor, is the current President of the American Board of Neurology and Psychiatry.

* * *

John M. Sheldon, M.D., Ann Arbor, recently was elected National President of Phi Rho Sigma Medical Fraternity.

* * *

The Michigan Health Council presented its Public Health Award to Marjorie Delavan, of Lansing, who retired as Chief of the Health Education Section of the Michigan Department of Health in 1957 after nearly forty years of service. In addition, the MHC recognized the *Detroit Times* and the *Lansing State Journal* for public service in printing the MSMS Survey of Consumer Opinion on Medical Care Protection questionnaire.

The annual Andrew S. Brunk Award went to the Marshall Health Council for the most outstanding community health program during 1957.

At the 1957 Pan Pacific Surgical Association Congress in Honolulu, the following Michigan M.D.'s were guest speakers: Kenneth B. Babcock, M.D., Detroit; W. O. Badgley, M.D., Lansing; R. C. Buerki, M.D., Detroit; F. A. Coller, M.D., Ann Arbor; W. S. Davies, M.D., Detroit; L. S. Fallis, M.D., Detroit; E. S. Gurdjian, M.D., Detroit; J. P. Pratt, M.D., Detroit; and C. S. Stevenson, M.D., Detroit.

* * *

Michigan Heart Association: R. E. Fisher, M.D., of Battle Creek is Secretary of the Association. J. G. Bielawski, M.D., Detroit, is Medical Director. Executive Headquarters of the MHA are located at 3919 John R. Street, Detroit.

* * *

Michigan Health Council television productions over WJBK-TV, Detroit: January 5—Farm Petroleum Safety—(Film); January 12—Eleventh Annual Michigan Rural Health Conference. Guests: J. K. Altland, M.D., Dan E. Reed and John A. Doherty, all of Lansing; January 19—M. D. Placement—(Film—"A Citizen Participates"); January 26—Vision—(Films—"Eyes for Tomorrow" and "Light Is What You Make It").

* * *

M.D. Locations through January 31, 1958: *Placed by Michigan Health Council*—Arthur Basel, M.D., East Lansing (Michigan State University Hospital).

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THE DOCTOR'S LIBRARY

Acknowledgments of all books received will be made in this column, and this will be deemed by us as full compensation to those sending them. A selection will be made for review, as expedient.

BIOGRAPHY OF A FOUNDATION. By William C. Richards and William J. Norton. The story of the Children's Fund of Michigan 1929-1954, a terminal philanthropic foundation created by the late U. S. Senator from Michigan, James Couzens, with gifts of $11,880,700. Detroit Children's Fund of Michigan, 1957.

This is a most interesting report. James Couzens, formerly vice president of the Ford Motor Company, who sold his interest back to Henry Ford, became mayor of Detroit, and later, United States Senator from Michigan. On May 1, 1929, he created a philanthropic fund or trust, with the donation of $10 million, its main interest to be the welfare of children, research and looking after their health, and he set up a twenty-five-year limit of the fund on the belief that at the end of twenty-five years conditions should be improved or different, or that some other program should be devised. He had another $1,800,000 to the trust and he appointed William J. Norton, of Detroit, as Executive Director and Executive Vice President. Under the terms of the trust, the earnings of the trust were to be used in children's welfare as well as the exhaustion of the whole fund which amounted in its final analysis to approximately $18 and a quarter million. This book is the history of the foundation, its establishment, its management and the tremendous work it did in various parts of the state including various children's clinics. The editor of this biography, William C. Richards, died before the completion of the work, and William J. Norton completed it. Our doctors in Michigan will many of them remember Mr. Norton as for several years the treasurer of Michigan Medical Service in its earlier years, and as a member of its Board of Directors for quite a period of time. The Foundation was officially closed, May 1, 1954. Preparing the biography, especially with the handicap of the death of the biographer, has delayed this publication, however, we think it is well worth our while and are happy with it.

CIBA FOUNDATION COLLOQUIA ON ENDOCRINOLOGY. Volume II. Hormones in Blood. Editors for the Ciba Foundation: G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Elaine C. P. Millar, A.H.-W.C., A.R.I.C. 74 illustrations. Boston: Little, Brown and Company, 1957. Price $9.00.

The eleventh volume of these admirable colloquia has the suggested subtheme of "back to blood" indicated that in the minds of many, and rightly so, the proper area for study of the hormones is the blood. In this medium, the hormones are circulating and from this medium regulate the bodies economy. In rather detailed critical papers and discussion, the methods of the determining of the blood levels of the hormones and the alterations of the levels in health and disease are considered.

The hypophyseal, thyroid, adrenal, placental and ovarian hormones are well considered, the pancreatic hormone to a less degree. The papers are presented by established investigators known in their respective fields and the material is well and thoughtfully covered. Inclusion of specific discussion of each paper and of general discussion of the topic gives the material a spontaneity which increases the interest and educational value to the reader.

It is a volume which should serve to provide the interested physician with a critical insight into many of the problems which present themselves to the investigator in the field of endocrine research and the assay of the hormones.

J. Frederic Johnson, M.D.

MANNUAL OF NUTRITION. New York: Philosophical Library, 1957. Price, $3.50.

This little book contains an immense amount of information regarding all types of nutrition problems condensed in very quickly referrable form including some tables of values and hints on the feeding of children of school age, feeding of the bed ridden, how to determine whether a diet is really nutritiously good and many other topics. A very handy volume for quick reference.

(Turn to Page 464)

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PSYCHOPATHIC PERSONALITIES. By Harold Palmer, M.D. New York: Philosophical Library, 1957. Price, $4.75.

This book is a careful analysis and study of numerous psychopathic personalities including schizophrenia, the depressive state, the obsessions, hysteria, epilepsy, tension syndromes, paranoid conditions and mania. Each is clearly discussed and well presented, but we believe could have been improved by making a few more pages and putting a little more space between the lines so that they would be easier to read. Philosophical and psychological material we believe is more attractive reading when there isn't quite the stress of following lines a little too close together. That is just a personal reflection on the printing but does not detract from the value of the book.

THE CHRONICALLY ILL. By John Fox, Ph.D. New York: 229 pages. Philosophical Library, Inc., 1957. Price, $3.95.

This well-written and interesting book is in good and easily readable type and discusses chronic sickness from many different angles, including what are the chronic illnesses, listing them and describing them. It contains chapters on self-help, invalidism, the crises individuals meet when they have to admit chronic illness, long-term care and its problems, the rehabilitation and taking up of life again. Age has its influence on chronic illness and also there is a very remarkable sociological aspect including the economic problems. Medical and institutional planning for the prolonged illness are again discussed from the results of studies at Montefiore Hospital which have been the subjects of previous books. It is a very very well-done booklet.

TEXTBOOK OF GYNECOLOGY. By John I. Brewer, B.S., M.D., Ph.D. Professor of Obstetrics and Gynecology, Northwestern University Medical School. Chief of Gynecology and Obstetrics, Passavant Memorial Hospital, Chicago. Second Edition. Baltimore: The Williams and Wilkins Company, 1958. Price, $15.00.

This new edition of a Textbook of Gynecology has added new material as well as a change in sequence of presentation. The book is divided into two parts. Part One deals with the symptoms and findings during the three major stages of a woman's life. Part Two deals with the various major entities. At the beginning of each chapter, there is a brief outline of the subject content. The primary purpose of the book is to teach gynecology from the clinical standpoint and not from a didactic one. The chapters on carcinoma of the cervix have been brought up to date, including the newer concepts of treatment. The chapter on endocrinology is in considerable detail and is of great assistance to one interested in the new fields of gynecology. Following each chapter, there is a complete reference list to the subject matter. The main value of the book is the correlation of the subject matter in such a way as to cause the reader to think and project. From this standpoint, it is of value not only to the student but to the general practitioner, as well as the specialist in gynecology. This book should be included in everyone's reference library.

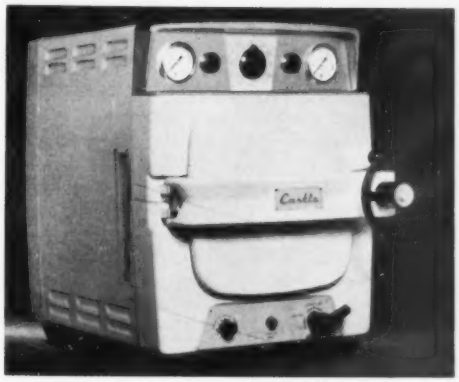
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GENESEE COUNTY CANCER DAY

The Genesee County Medical Society will hold its thirteenth Annual Cancer Day Wednesday, April 9, 1958. Papers will be presented as follows:

Morning Session: "The Use of Angiography in the Diagnosis of Malignancy"—*Benjamin Felson, M.D.*, Professor and Director, Department of Radiology, University of Cincinnati; "Radical Pelvic Surgery for Lower Abdominal Cancer"—*Eugene M. Bricker, M.D.*, Associate Professor of Clinical Surgery, Washington University, School of Medicine, St. Louis, Missouri; "Cancer of the Head and Neck"—*Edgar L. Frazell, M.D.*, Attending Surgeon and Chief, Head and Neck Service, Memorial Hospital, New York.

Afternoon Session: "The Pathology of Gastrointestinal Cancer"—*Robert C. Horn, Jr., M.D.*, Pathologist-in-Chief and Director of Laboratories, Henry Ford Hospital, Detroit, Michigan; "Primary Cancer of the Lymph Nodes"—*Alfred Gellhorn, M.D.*, Associate Professor of Medicine, College of Physicians, Columbia University and Director, Medical Service, Francis Delafield Hospital, N. Y.; "Gastric Ulcer and Gastric Cancer"—*I. S. Ravdin, M.D.*, John Rhea Barton Professor of Surgery, School of Medicine, University of Pennsylvania; Surgeon-in-Chief, Hospital of the University of Pennsylvania.

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Riseman, J. E. F., Altman, G. E., and Koretsky, S.: Nitroglycerin and Other Nitrites in the Treatment of Angina Pectoris, Circulation (Jan.) 1958.

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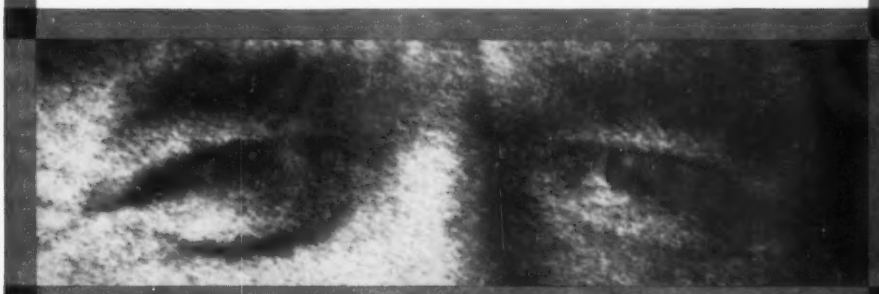


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Source—Hyman, M.: Some Aspects of Psychiatry in General Practice, GP *16*:83 (Oct.) 1957.

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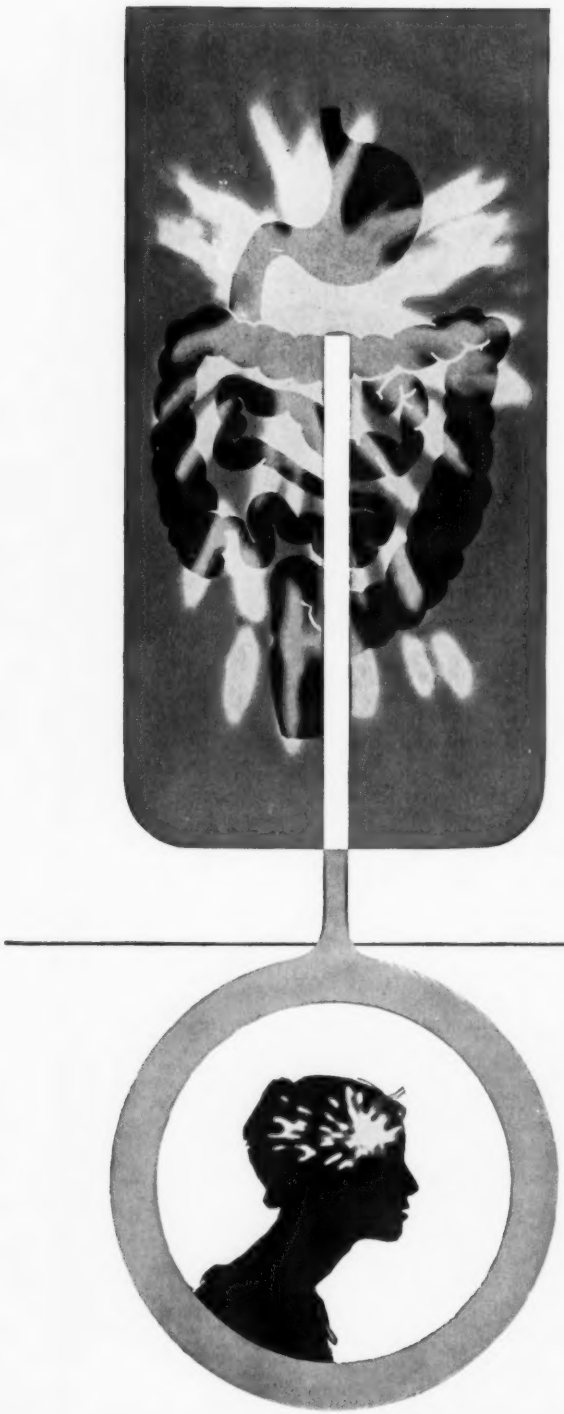
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